

SONY[®]

3-858-174-12 (1)

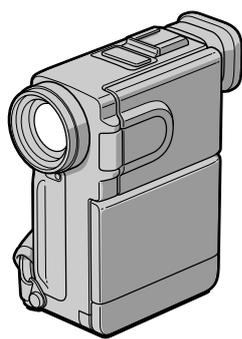
Digital Video Camera Recorder

Operating Instructions

Before operating the unit, please read this manual thoroughly,
and retain it for future reference.

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èÄ Å%ò´íÖÖÏÙ‡Ú‡`ÈÄÈ‡ÓÓ‡ ‡Ú‡,îÈ‡ÚÁÍ,ìÖÖ Ó´ÚÈÚÄ,
ÓÓÈ‡ÏÙÈÖÚ‡,%ò‡ììÖÄ ÙíÖ,Ó%òÖÚ,ÓÈÖÓí ‡ñÈÚÄÄ,Ó%òñ
%ò‡ì,îÄÈ`Èí ÖÖ ‡,Óí.



DCR-PC7E

Mini **DV** Digital
Video
Cassette
Handycam Vision[™]

©1996 by Sony Corporation

DCR-PC7E.3-858-174-12(E,R)

Before you begin

Using this manual

εΑ Α%ο ιτ-τΙΟΙ ρΙΟΟιUτUτ-ΕΕ

αΟΟΟι,ΑΟ,τΙΕΑ %οτΙΙΟ,,Ο UΙΟ,Ο%ου,τ

Welcome !

Congratulations on your purchase of this Sony Handycam Vision™ camcorder. With your Handycam Vision, you can capture life's precious moments with superior picture and sound quality. Your Handycam Vision is loaded with advanced features, but at the same time it is very easy to use. You will soon be producing home video that you can enjoy for years to come.

As you read through this manual, buttons and settings on the camcorder are shown in capital letters. e.g., Set the POWER switch to CAMERA. As indicated with  in the illustrations, you can hear the beep sound to confirm your operation.

Note on TV colour systems

TV colour systems differ from country to country. To view your recordings on a TV, you need an PAL system-based TV.

Precaution on copyright

Television programmes, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provision of the copyright laws.

ΝΟ· Ο ΟΟΕτΙΟ,τU, !

εΟΑ%ο τ.ΙηΑιτUτUτ ΕΟ· ΑUΑιΕΑι
%οτΙΙΟΕ ,Ε%οΑΟιτΙΑ ° Handycam Vision ™
UΕ ι° Sony. ε ΟΟΙΟ~ ,τUτ-ΑΕ
,Ε%οΑΟιτΙΑ ° Handycam τUτ ΟΙΟΕΑUΑ
ΑτUτ-ΑιτUτ, %οΟ Ο,,ΕΑ τUτ ι,,ΙΟ,ΑιΕη
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ΕΑΟ· τΕΑιΕη Ε Α,Uιτ.
τUτ τ ,Ε%οΑΟιτΙΑ τ Handycam Vision
ΟΟιτ-Αιτ UΟΟ,Α τΑιUτ,Ο,τΙι ιΕ
UUιτ-ΕηιΕ, ΙΟ , UΟ ΕΑ , Αη ΑΑ Ο-Αι
ΙΑ,ΙΟ ΕΟΟΟι,ΑΟ,τUτ. τΟΙΟ ΑτUτ· U%οΑUΑ
ΟΟΑ%οτUτ, ΟΑιΑΕιτ-Α ,Ε%οΑΟΟ Ο, τΙι°
ΙΟΥΟ ιΕ ΟΙΟΕΑUΑ ιτUτΕ%οτUτ,Οη
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αΟ,,%οτUτ·U%οΑUΑ-ΕUτUτ, %οτΙΙΟΑ UΙΟ,Ο%ου,Ο,
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ε Ει. ΙΟΥτΙΟ,ΕUΑ ,ιιτ-τUτΑι, POWER ,
ΟΟΙΟΕΑιΕΑ CAMERA.
ΟΟιΕ ιτ ΕΟUιιτ, UιτΑ°,τAUΟη ΑιτΙ  UΟ
τUτ ΙΟΕΑUΑ ΟiUτUτ ΑUιτΑ ι-ε Α,UΙΟ,ΟΕ
ΟΕ,,ιτΙ %οηfι ΟΟ%ου,Α Ε%οΑιΕη τUτ-ΑΕ τUτ·

ε ΕΙΑτ-τΙΕΑ Ι ΟΕΟUΑιτΙ
^,ΑUΙΟ,,Ο UΑiΑ,Ε%οΑιΕη

εΕΟUΑιτ° ^,ΑUιΟ,Ο UΑiΑ,Ε%οΑιΕη ΟUιΕ-τUτUτ
,Ατ,ΕΟΕiΟΟUΕ ΟUΟU τΙ°. Νη Ο ΟΟiΟΥ τ
τUτ-Ει ΑτUτΕΟΑΕ ΟΟUΑiΑ,ΕΑΟ UτUτ
iΑΟ·iΟ%οΕiΟ ΕΟΟΟι,ΑΟ,τUτ, UΑiΑ,ΕΑΟ ,
ΟΟiΟ,τΙι° Ε ιτ ΕΕΟUΑiΑ PAL.

ε Α%οΟΟUΑ ΑΕΑiΕΑΟ· τUτUτ ΟiΟι
Ο τUτ,Α

iΑiΑ,ΕΑΕΟιι-Α Ο Ο, τΙι° ΙΕiΟΥΕiτ,ι°
,Ε%οΑΟiΑiUτ Ε %ο U,,ΕΑ ιτUτ ΕτΙτ ΙΟ,,UU ·Uτ,
ΑτUτ-Αιτ° τUτUτ ΟiΕi Ο τUτ,Οi.
τUτUτ τUτ,ΟiΟτUτ ΑτUτΕΟ, UτΙΕι ιτUτ ΕτΙΟ,
iΟΕΑU Ο ΟUΕ,Ο Ατ-ΕUτ, UΟiΟ,Εηi ΑτΙΟιτUτ
τUτUτ ΟiΟi Ο τUτ,Α.

Precautions on camcorder care

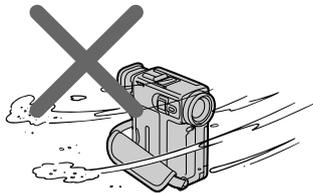
- Do not let sand get into the camcorder. When you use the camcorder on a sandy beach or in a dusty place, protect it from the sand or dust. Sand or dust may cause the unit to malfunction, and sometimes this malfunction cannot be repaired [a].
- Do not let the camcorder get wet. Keep the camcorder away from rain and sea water. Letting the camcorder get wet may cause the unit to malfunction, and sometimes this malfunction cannot be repaired [b].
- Never leave the camcorder exposed to temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight [c].

Precautions on camcorder care

- Μην αφήνετε άμμο να εισέλθει στην κάμερα. Όταν χρησιμοποιείτε την κάμερα σε αμμώδη παραλία ή σε αμμώδη ή πολύ σκόνη περιβάλλον, προστατέψτε την από την άμμο ή τη σκόνη. Η άμμος ή η σκόνη μπορεί να προκαλέσει βλάβη στην κάμερα, και μερικές φορές η βλάβη αυτή δεν μπορεί να διορθωθεί [α].
- Μην αφήνετε την κάμερα να βρέξει. Μην αφήνετε την κάμερα να βρεθεί κάτω από τη βροχή ή τη θάλασσα. Η βροχή ή η θάλασσα μπορεί να προκαλέσει βλάβη στην κάμερα, και μερικές φορές η βλάβη αυτή δεν μπορεί να διορθωθεί [β].
- Μην αφήνετε την κάμερα να εκτεθεί σε θερμοκρασίες πάνω από 60°C (140°F), όπως σε ένα αυτοκίνητο που είναι παρκαρισμένο στον ήλιο ή σε άμεσο ηλιακό φως [γ].

Before you begin / Πριν ξεκινήσετε

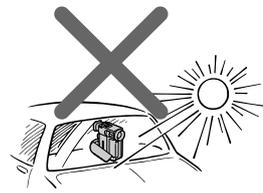
[a]



[b]



[c]



Note on the colour viewfinder and the LCD screen

The colour viewfinder and the LCD screen are made with high-precision technology. However, black points or bright points of light (red, blue, or green) may appear constantly on the colour viewfinder or the LCD screen. These points are not recorded on the tape. This is not a malfunction. (Effective dots: more than 99.99%)

Οι οθόνες χρώματος και ο οπίσθιος οθλήσκονας είναι κατασκευασμένες με υψηλή τεχνολογία. Ωστόσο, μπορεί να εμφανιστούν συνεχώς μαύρα ή φωτεινά σημεία (κόκκινα, μπλε ή πράσινα) στην οθόνη χρώματος ή στην οθόνη LCD. Αυτά τα σημεία δεν καταγράφονται στο ταινίο. Αυτό δεν αποτελεί βλάβη. (Εffective dots: more than 99.99%)

Contents of the recording cannot be compensated if recording or playback is not made due to a malfunction of the camcorder, video tape, etc.

Εάν η εγγραφή ή η αναπαραγωγή δεν πραγματοποιηθεί λόγω βλάβης στην κάμερα, στο ταινίο ή σε άλλα εξαρτήματα, τα περιεχόμενα της εγγραφής δεν μπορούν να διορθωθούν.

Getting started

Charging and installing the battery pack

Before using your camcorder, you first need to charge and install the battery pack. To charge the battery pack, use the supplied AC power adaptor.

This camcorder operates with the NP-F100/NP-F200 "InfoLITHIUM" battery pack.

"InfoLITHIUM" is a trademark of Sony Corporation.

Charging the battery pack

- (1) Connect the mains lead to the AC power adaptor.
- (2) Align the hooks of the battery pack with the AC power adaptor. Then fit the battery pack in the direction of the arrow.
- (3) Connect the mains lead to mains. The CHARGE lamp (orange) lights up. Charging begins.

When the CHARGE lamp goes out, normal charge is completed (**Normal charge**). For a full charge, which allows you to use the battery longer than usual, leave the battery pack in place for approximately one hour (**Full charge**). Unplug the cord from the mains, then remove the battery pack and install it into the camcorder. You can also use the battery pack before it is completely charged.

Getting started

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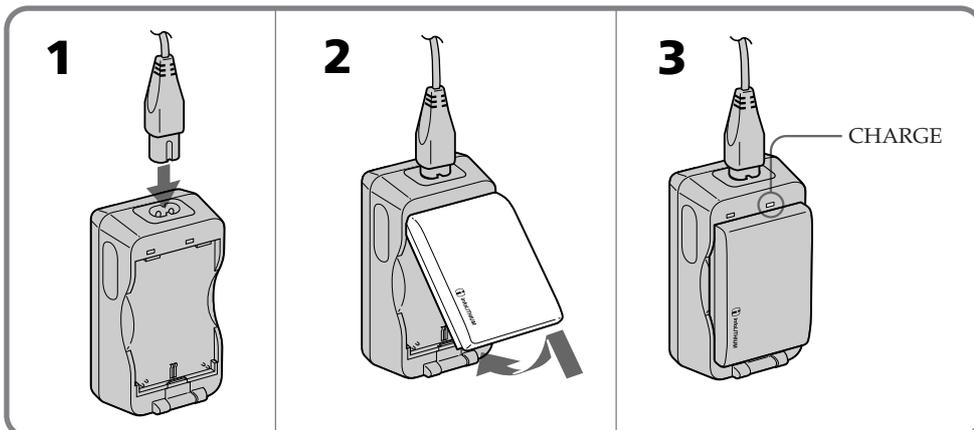
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Getting started / Getting started / Getting started



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Charging and installing the battery pack

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Charging time

Battery pack	Charging time *
NP-F100 (supplied)	130 (70)
NP-F200	170 (110)

Numbers in parentheses indicate the time for a normal charge. **(Normal charge)**

* Approximate number of minutes to charge an empty battery pack fully using the supplied AC power adaptor. **(Full charge)** (Lower temperatures require a longer charging time.)

Battery life

While using with viewfinder

Battery pack	Continuous recording time **	Typical recording time ***
NP-F100 (supplied)	55 (45)	30 (25)
NP-F200	100 (85)	50 (45)

While using with LCD

Battery pack	Continuous recording time **	Typical recording time ***	Playing time with LCD
NP-F100 (supplied)	45 (40)	25 (20)	50 (45)
NP-F200	75 (70)	40 (35)	90 (80)

Numbers in parentheses indicate the time when you use a normal charged battery pack.

When using both the viewfinder and the LCD screen, the battery life is shorter.

When recording in a cold environment, the battery life is shorter

** Approximate number of minutes to record at normal temperature

*** Approximate number of minutes when recording with repeated recording start/stop, standby, zooming and turning the power on/off. The actual battery life may be shorter.

Note on remaining battery time indication during recording

Remaining battery time is displayed on the LCD screen or in the viewfinder. It may not be displayed properly, however, depending on the conditions and circumstances of use.

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NP-F100(Ô Èí±,±ÁÚÓñ)	130 (70)
NP-F200	170 (110)

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ÍÓ Í±Í,ÍÓÈ Á±ñ%íÈ. (Ç Ó Í±Í Í±ñ Á±ñ%í±)

* è È·ÈÁÈÚÁÍ,ÍÓÁ, Áñ, ÌÈÍÚÙ±, %ñíí ÓÓÍÍÓÈ
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ÈÓÓÍ,ÁÓ,±ÈÁÍÓ Èí±,±ÁÍÓ,Ó ÓÁÚÁ,Ó,Ó
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è ÓÍ ÓÍÙÈ° Á±ñ%± ·±Ú± ÁÈÍÓ,Ó ·ÍÓÍ±
è È ÈÓÓÍ,ÁÓ,±ÈÈÈ,È%ÓÈÓÍ±ÚÁñ

Á±Ú± ÁÈÍ°È ·ÍÓÍ	Ç Áñ ÍÁ-Ó Á°,ÍÓÈ Á±ÓÈÓÈ**	Ç Áñ ÛÈÓÈ·ÍÓÈ Á±ÓÈÓÈ***
NP-F100 (Ô Èí±,±ÁÚÓñ)	55 (45)	30 (25)
NP-F200	100 (85)	50 (45)

è È ÈÓÓÍ,ÁÓ,±ÈÈÈ ÜäÑ

Á±Ú± ÁÈÍ°È ·ÍÓÍ	Ç Áñ ÍÁ-Ó Á°,ÍÓÈ Á±ÓÈÓÈ**	Ç Áñ ÛÈÓÈ·ÍÓÈ Á±ÓÈÓÈ***	Ç Áñ ÓÓÓ Ó-ÈÁ,Á%ÁÈñ Ó Ó ÓÍÓ °, ÜäÑ
NP-F100 (Ô Èí±,±ÁÚÓñ)	45 (40)	25 (20)	50 (45)
NP-F200	75 (70)	40 (35)	90 (80)

óÈÒÍ±, ÓÍÓ·Í± Ûí±Á°,±Ú ÍÓÍÈ·ÁÓÚ,Ó
ÌÈÍÚÙ, ÍÓ,%± Ç ÈÓÓÍ,ÁÚÁÚÁ ÍÓ Í±Í,ÍÓ

Á±ñÈÁÍ°È ·±Ú± ÁÈÍ°È ·ÍÓÍ
è È ÈÓÓÍ,ÁÓ,±ÈÈÈ È,È%ÓÈÓÍ±ÚÁñ È °±±
ÜäÑ Ó ÓÍ ÓÍÙÈ° Á±ñ%± ·±Ú± ÁÈÍÓ,Ó ·ÍÓÍ±
·Á%ÁÚÍÓ Ó·Á.

è È Á±ÓÈÓÈ, ÍÓÍÓ%ñ·Í ÛÓÍÓ,Èñ, Ó ÓÍ ÓÍÙÈ°
Á±ñ%± ·±Ú± ÁÈÍÓ,Ó ·ÍÓÍ±·Ú%ÁÚÍÓ Ó·Á.

** è È·ÈÁÈÚÁÍ,ÍÓÁ, Áñ Á±ÓÈÓÈ Ó È
ÍÓ Í±Í,ÍÓÈ ÚÁÓÍÁ ±ÚÙ Á.

*** è È·ÈÁÈÚÁÍ,ÍÓÁ, Áñ, ÌÈÍÚÙ±, Ó È
Á±ÓÈÓÈ Ó ÓÓÚÓ Ìí Ì±±ÍÓÍ/ÓÓÙ±ÍÓ,ÓÍ
Á±ÓÈÓÈ, ÁÈÈÍÓÍ,ÓÚÓ,ÍÓÓÙÈ,ÌÁÁ%ÓÍ
,È%ÁÓÍ±ÍÁ ° È, Ìí ·ÁÈÁÍ/,ÍÍ ·ÁÈÁÍ
ÓÈÚ±Èñ, Ì±ÍÙÈ·ÁÓÍÈÈ Ó ÓÍ ÓÍÙÈ° Á±ñ%±
·±Ú± ÁÈÍÓ,Ó ·ÍÓÍ± ÍÓÈÁÚ ·Ú, ÍÓ Ó·Á.

è ÈÍÁ·±Èñ Í Ûí±Á±ÈÈ. ÓÓÙ±·Á,ÓÓñ
, ÁÍÁÈÈ ±·ÓÚ° ·±Ú± ÁÈÍÓ,Ó ·ÍÓÍ±,Ó
, Áñ Á±ÓÈÓÈ.

éÓÙ±, ÁÁÓñ, Áñ ±·ÓÚ° ·±Ú± ÁÈÍÓ,Ó ·ÍÓÍ±
ÓÚÓ, ±È±ÁÚÓñ Ì± ±ÍÁ ÜäÑ ÈÈÈ,
È%ÓÈÓÍ±ÚÁñ, èÍÓ ÍÓÈÁÚÍÁ ÓÚÓ, ±È±Ú,Óñ
Ó ±ÈÍ,ÍÓ, Á±ÈÓÈÍÓÓÙÈ ÓÚ ÛÓÍÓ,ÈÈ È
Ó·ÓÚÓñÚÁÍ,ÓÚ,ÈÓÓÍ,ÁÓ,±Èñ.

Charging and installing the battery pack

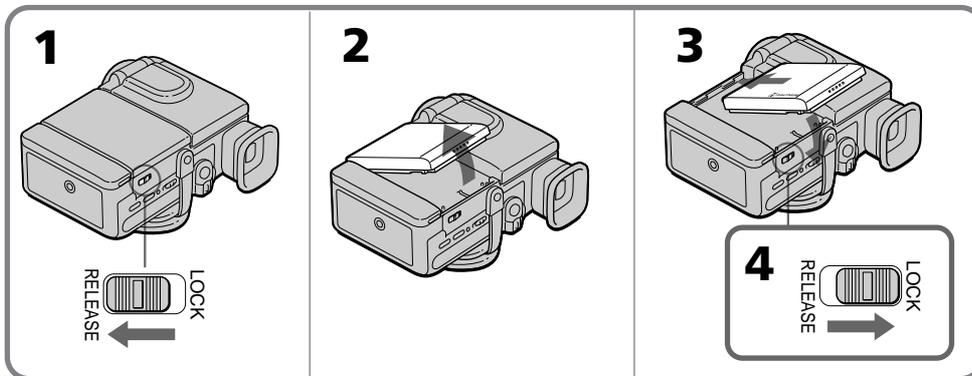
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·†Ú† ÂÈíó,,ó ·íó†

Installing the battery pack

- (1) Set the BATT LOCK/RELEASE switch to RELEASE.
- (2) Remove the battery terminal cover.
- (3) Align the hooks of the battery pack with the catches of the camcorder and place the battery pack in place.
- (4) Set the BATT LOCK/RELEASE switch to LOCK.

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- (1) ìòÙ†íó,ÈÚÁ ÒÁ Áí† ·†ÚÁ†, BATT LOCK/RELEASE, ÒíóÈÁíÈÁ RELEASE.
- (2) èíÈíÈÚÁ í °íÙ ·†Ú† ÂÈí†, íóìÙ†íó,,
- (3) á†·ÁÒÈÚÁ í °íÈ ·†Ú† ÂÈíó,,ó ·íó† Á† Á†,·†Ú°,È%Áóí†íÁ ° È ÛòÙ†íó,ÈÚÁ ·†Ú† ÂÈí°È ·íó† í† íÁòÙó.
- (4) ìòÙ†íó,ÈÚÁ ÒÁ Áí† ·†ÚÁ†, BATT LOCK/RELEASE, ÒíóÈÁíÈÁ LOCK.



To remove the battery pack

Follow the procedure above and in step 3, remove the battery pack. When removing the battery pack, be careful not to drop it.

Note on battery terminal cover

To protect the battery terminals, install the battery terminal cover after the battery pack is removed.

Note on BATT LOCK/RELEASE switch

Be sure that the BATT LOCK/RELEASE switch is set to LOCK when the battery pack is installed. Otherwise, it may drop out when you use the camcorder.

To prevent malfunction

In the following cases make sure that the POWER switch is set to OFF first.

- Installing and removing the battery pack.
- Inserting and ejecting a cassette.

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3, òíÈíÈÚÁ ·†Ú† ÂÈí°È ·íó†. è È Òì†ÚÈÈ
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è ÈíÁ·†íÈÁ í í °íÁ ·†Ú† ÂÈí°
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ÒóíÁ òì†ÚÈ† ·†Ú† ÂÈíó,,ó ·íó†.

è ÈíÁ·†íÈÁ í ÒÁ Áí† ·†ÚÁ†, BATT
LOCK/RELEASE
ì·Á%ÈÚÁÒ,, °Óó ÒÁ Áí† ·†ÚÁ†, BATT LOCK/
RELEASE í†íó%ÈÚó†, ÒíóÈÁíÈÁ LOCK,
íó,,%ó† ÛòÙ†íó,íÁì ·†Ú† ÂÈí°È ·íó†. Ç
Ó ÓÚÈ,íó† òíÙ·†Á òííÈÁÚ, °òòÙ,, íó,,%ó†
Ç° ·Ù%ÁÚÁ Èóóóí,Áó,·†Ú°,È%Áóí†íÁ Û.

Ñí† Ó Á%ó†, ·†íÈ† íÁÈòó ·†íóóÈÈ
Ç òíÁ%ó†. È í òíÙ·††, òòÁ, ·†Ú·Á%ÈÚÁÒ,, °Óó
° í† ·†ÚÁ†, POWER ÛòÙ†íó,íÁì,
ÒóíóÈÁíÈÁ OFF.

- ìòÙ†íó,í† È Á†íÁ† ·†Ú† ÂÈíó,,ó ·íó†.
- ÇòÙ†,í† È °Ú†íÈ,†íÈÁ í†òòÁÚ°.

Inserting a cassette

ÇÒÚ±,Í± Í±ÒÒÁÚ°

You can use mini DV cassette with ^{Mini} DV logo* only.

Make sure that the power source is installed.

- (1) Place the grip strap away from the lid of the cassette compartment to avoid damaging the lid.
- (2) Open the lid of the cassette compartment and push **EJECT** inside the lid. The cassette compartment automatically lifts up and opens.
- (3) Insert a cassette with the window facing out.
- (4) Push the cassette compartment. The cassette compartment is automatically pulled down.
- (5) Close the lid until it clicks.

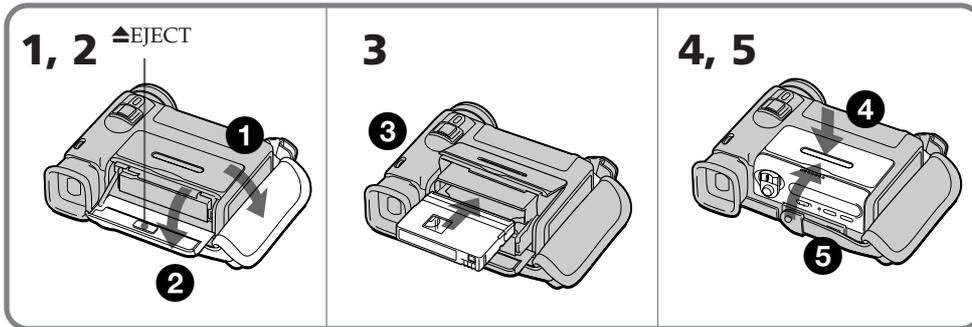
* ^{Mini} DV is a trademark.

Ç° ÍÒÉÁÚÁ ÈÒÒÓÍ,ÁÓ,±Ú, ÚÓÍ,ÍÓ Í±ÒÒÁÚÚ mini DV, co Áíáíóí ^{Mini} DV logo*.

í·Á%ÉÚÁÒ, °ÚÓ ÈÓÚÓ°ÍÉÍ ÓÉÚ±Èñ ÙÒÚ±ÍÓ,ÍÁí.

- (1) ±±ÒÒÓÍÓÉÉÚÁ ÁíÁííÓÉÁ±,±Ú, ÓÚÓ ÓíÁ ÓÚ Í °ÍÉ Í±ÒÒÁÚÍÓ,Ó ÓÚÓÁÍ±,Ó ÉÁ·ÁÈ±ÍÉÁ ÓÓ, ÁÈ%ÁíÈñ Í °ÍÉ.
- (2) éÚÍ ÓÉÚÁ Í °ÍÚ Í±ÒÒÁÚÍÓ,Ó ÓÚÓÁÍ±. Ç±ÉÍÉÚÁ **EJECT** ,ÍÚÚ È Í °ÍÉ. ±±ÒÒÁÚÍ°È ÓÚÓÁÍ±,ÚÓÍ±ÚÉ°ÁÓÍÈ ÓÓ%Éí±ÁÚÓñÈ ÓÚÍ °±ÁÚÓñ.
- (3) ÇÒÚ±, ÚÁ Í±ÒÒÁÚÚ ÓÍÓ°ÍÓÍ, Ó· ±°Áíí°Í Í±ÚÉÚ.
- (4) Ç±ÉÍÉÚÁ Í±ÒÒÁÚÍ°È ÓÚÓÁÍ. ±±ÒÒÁÚÍ°È ÓÚÓÁÍ±,ÚÓÍ±ÚÉ°ÁÓÍÈ,Úñ,È,±ÁÚÓñ,ÍÉÁ.
- (5) ±±Í ÓÉÚÁ Í °ÍÚ, ÓÓÍ± ÓÍ± ÍÁ Á±°ÁííÁÚÓñ.

* ^{Mini} DV ñ,ÍñÁÚÓñ ÚÓ,± Í°Í Áí±ÍÓÍ.



Note

Before you close the lid of the cassette compartment, make sure the cassette compartment is completely pulled down.

To eject the cassette

Follow the procedure above and in step 3, take out the cassette.

To Prevent Accidental Erasure

Slide and open the tab on the cassette to expose the red mark. If you try to record with the red mark exposed, the and indicators flash on the LCD screen or in the viewfinder, and you cannot record on the tape. To re-record on this tape, slide and close the tab to cover the red mark.

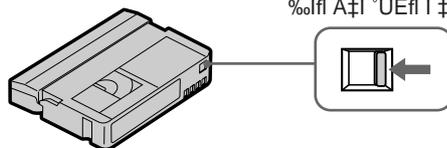
è ÈíÁ°±ÈÉÁ

èÁ Á% ÚÁÍ Í±Í Á±Í °Ú, Í °ÍÚ Í±ÒÒÁÚÍÓ,Ó ÓÚÓÁÍ±Ú·Á%ÉÚÁÒ, °ÚÓÍ±ÒÒÁÚÍ°È ÓÚÓÁÍ ÓÓÍÍÓÓÚ, ,ÚñÍÚÚ,ÍÉÁ.

Ñíñ , °Ú±ÍÍÈ,±íÈñ Í±ÒÒÁÚ° ÈíÁ%Úñ, °ÁÓÈÈ±íÈÈ Ó Ó°Á%Ú Á, ÓÚííÚÁ 3,Ú%±íÈÚÁí±ÒÒÁÚÚ.

Ñíñ Ó Á%ÓÚ, ±°ÁíÈñ ÒíÚ°±ÈíÓ,Ó ÓÚÈ ±Èñ

±%Éí,ÚÁÈ ÓÚÍ ÓÉÚÁíÁÓÁÒÓÚÍ±±ÒÒÁÚÁ, °ÚÓ· °ÍÓ ,È%ÍÓ Í ±ÓÍÚ, ÍÁÚÍÚ. ÓÒÍÈ Ç° ÓÓÓ°Ú±ÁÚÁÒ, °ÓÓÍÈÚ, Á±ÓÈÓ, Ó È,È%ÉÍÓÈ Í ±±ÓÍÈ ÍÁÚÍÁ, ÚÓ Èí%Éí±ÚÓ ° È ·Ú%ÚÚ ÍÈ,±Ú, Í± °Í±Á ÚñÈ ÈÍÈ, È%ÓÈÓÍ±ÚÁíÁ, È Ç° ÍÁ ÓÍÓÉÁÚÁ Ó ÓÉÁ,ÁÓÚÈ Á±ÓÈÓ, Í± °ÚÚ ÍÁÚÚÚ. Ñíñ, °ÓÓÍÁíÈñ ÍÓ,ÓÈ Á±ÓÈÓÈ Í± Ú±ÍÚ, ÍÁÚÚÚ Ó%Éí, ÚÁ È Á±Í ÓÉÚÁ ÍÁÓÁÓÚÓÍ %ññ Á±Í °ÚÈñ Í ±±ÓÍÈ ÍÁÚÍÈ.



Camera recording

á±ÖÈÒ Ò ÖÓÍÒ[~]
É%ÁÓÍ±Á

Notes on LP mode

- We recommend to use this camcorder to play back a tape recorded on this camcorder. If a tape recorded on other camcorder is played back on this camcorder, or vice versa, mosaic-pattern noise may appear.
- When you record in SP and LP modes on one tape or you record some scenes in LP mode, the playback picture may be distorted or the time code may not be written properly between scenes.
- We recommend to use a Sony ME cassette.
- You cannot make audio dubbing on a tape recorded in LP mode. Use the SP mode for the tape to be audio dubbed.

Notes on the time code

- The time code indicates the recording or playback time, "0:00:00" (hours : minutes : seconds) in CAMERA mode and "0:00:00:00" (hours : minutes : seconds : frames) in PLAYER mode.
- Be sure not make a blank portion when recording, because the time code will start from "0:00:00:00" again. You cannot rewrite the time code on the tape if there is a blank portion between pictures.

Note on connecting an external microphone

You can record audio sound by connecting the VMC-LM7 adaptor (not supplied) and an external microphone. Connect the microphone to the MIC jack of the VMC-LM7 adaptor. While recording through an external microphone, the built-in microphone of the camcorder does not work.

Note on the beep sound

As indicated with  in the illustrations, a beep sounds when you turn the power on or when you start recording, and two beeps sound when you stop recording, confirming the operation. Several beeps also sound as a warning of any unusual condition of the camcorder. Note that the beep sound is not recorded on the tape. If you do not want to hear the beep sound, select "OFF" in the menu system.

Note on remaining tape indicator

The indicator may not be displayed accurately depending on the tape. Though the indicator does not appear at the time of recording, it will appear in a few seconds.

è ÈÌÄ±ÈÈ í ÁÈÈÌÙ LP

- ä° ÁÍÓÍÁÍ%ÚÁÍ ÈÖÖÓÍ, ÁÓ, ±Ú, %±ÌÙ, É%ÁÓÍ±Á Û%íñ, ÖÖ ÖÈÁ, Á%ÁÍÈÈ ÍÁÍÙ, Á±ÖÈÖ±ÍÖÈ Ì±%±ÍÍÖÈ, É%ÁÓÍ±Á Á. ÖÓÍÈ ÍÁÍÙ±, Á±ÖÈÖ±ÍÍ±ñ Ì±%Ú, ÖÈ, É%ÁÓÍ±Á Á, Ú%ÁÚ, ÖÖ ÖÈÁ, Ö%ÈÚ Öñ±%±ÍÍÖÈ, É%ÁÓÍ±Á ÁÈÈÈ Ì±Ö. Ö Ú, ÚÓÍÖÈÁÚ ÖÖñ, ÈÚ Öñ ÍÖÁ±È±ñ Á±ÁÚ± ÖÓÍÁÍ.
- ÖÓÍÈ Ç° Á±ÖÈÖ° ±ÁÚÁ, ÁÈÈÈ± LP È SP Ì± Ö%ìÙ È ÚÚ ÈÁ ÍÁÍÙÚ ÈÈÈ ÁÓÍÈ Ç° Á±ÖÈÖ° ±ÁÚÁ ÍÁÍÙÖ° Á Ö°ÁÍ° ÁÈÈÈÁ LP ÚÓ, ÖÖ ÖÈÁ, Ö%ÈÍÖÈÁÖ. ±ÈÁÍÈÁ ÍÖÈÁÚ. Ú, ÈÓÍ±ÈÁÍÖ ÈÈÈ, ÁÍÁÍÖÈ ÍÖ%Ú ÍÖÈÁÚ. Ú, Á±ÖÈÖ±Í ÍÁÖ ±ÈÈ, ÍÖ ÍÁÈ%Ú Ö°ÁÍ±È.
- ä° ÁÍÓÍÁÍ%ÚÁÍ ÈÖÖÓÍ, ÁÓ, ±Ú, Ì±ÖÖÁÚÚ Sony ME.
- àÖÖÓÍ ÁÚÈÚÁ ÁÈÈÈ SP %íñ ÍÁÍÙ, Ì± ÍÓÚÖ° Á. Ú%ÁÚ, ÖÓÍñÚ Öñ ±Ú%ÈÖ%Ú. ÈÈ Ö, ±ÈÁ, Ç° ÍÁ ÓÍÖÈÁÚÁ, ÖÓÍÈÚ, ±Ú%ÈÖ%Ú. ÈÈ Ö, ±ÈÁ Ì± ÍÁÍÙÚ, Á±ÖÈÖ±ÍÙ, ÁÈÈÈÁ LP.

è ÈÌÄ±ÈÈÈ í, ÁÍÁÍÓÍÚ ÍÖ%Ú

- Ç° ÁÍÁÍÖÈ ÍÖ%Ú Ì±Á° ±ÁÚ, Áñ Á±ÖÈÖÈ ÈÈÈ, ÖÖ ÖÈÁ, Á%ÁÍÈÈ ÖÖ ÈÈÈÖÚ "0:00:00" (Ç° : ÍÈÍÙÚ : ÖÁÍÙÍ%), ÁÈÈÈÁ CAMERA, È ÖÖ Ö ÈÈÈÖÚ "0:00:00:00" (Ç° : ÍÈÍÙÚ : ÖÁÍÙÍ% : Ì±%). ÁÈÈÈÁ PLAYER.
- ÁÚ% ÚÁ ÍÈÈ±ÚÁÍ±, ÚÖ° ÍÁ ÖÓÍÙÈÍÖÖ, ÍÁÁ±ÖÈÖ±ÍÖÈ ±ÖÚÈ Ö ÈÁ±ÖÈÖÈ, Ú±ñ±ñ, ÁÍÁÍÖÈ ÍÖ% ÖÍÖ, Ì± ÍÁÚ ÖÚÖ°ÁÚ Ö "0:00:00:00". Ç° ÍÁ ÍÖÈÁÚÁ ÖÁ ÁÁ±ÖÈÖ±Ú, ÁÍÁÍÖÈ ÍÖ% Ì± ÍÁÍÙÁ, ÁÓÍÈ Ì± ÍÁÈ ÖÚ°ÁÚ, Ú, Ú ÍÁÁ±ÖÈÖ±Í Ì± ±ÖÚÈ ÍÁÈ%Ú ÈÁÖ. ±ÈÁÍÈÈÈ.

è ÈÌÄ±ÈÈÄ í ÖÖ%ÖÖÁ%ÈÍÁÈÈ, ÌÄ±Ä, Ö ÍÈÈ ÖÚÖÍ±

Ç° ÍÖÈÁÚÁ Á±ÖÈÖ° ±Ú, Á, ÚÍÖ, ÖÁ ÖÖÖ Ö, ÖÈ%ÁÍÈÄ ÖÚÁÍ ÖÖ%íñ, ÁÍÈÈÈ±%±ÚÁ ± VMC-LM7 (ÍÁ Ö ÈÈ± ±ÁÚÖñ) È ÌÄ±Ä, Ö ÍÈÈ ÖÚÖÍ±. èÖ%ÖÖÁ%ÈÈÈÁÍÈÈ ÖÚÖÍ, ÍÁÁ%ÚMIC±±%ÖÚÁ Á VMC-LM7, èÈÈ ÁáÖÈÈ Á ÁÁ, ÍÁ ÍÈÈÈ ÈÈÈ ÖÚÖÍ, ÖÚ ÖÁÍÈÈ ÈÈÈ ÖÚÖÍ, É%ÁÓÍ±Á ÍÁ ±. ÖÚ±ÁÚ.

è ÈÌÄ±ÈÈÄ í ÁÚÍÁ ÍÓÍÙ Á, ÚÍÖ, ÖÍÙ ÖÈ, Ì±ÍÙ ä±ñ ÚÍ±Á±ÍÖ Ì± ÈÖÚÈÈÈ Ö ÖÓÍÖ° , Ö%ÈÍ ÁÚÍÁ ÌÈÈ ÖÈÈ, Ì± Á, ÚÈÚ, ÍÖ, %± Ç° Ì± ±ÁÚÁ ÖÈÚ±ÈÄ ÈÈÈ Ì± ÈÈ±ÁÚÁ Á±ÖÈÖ, È %±, ± ÁÚÍÁ ÌÈÈ ÖÈÈ, Ì± Á, Ú±Ú, ÍÖ, %± Ç° ÖÖÚ±ñ, ÈÈ±ÁÚÁ Á±ÖÈÖ, ÖÖ%Ú, Á È%±ñ ÚÁÍÖ±ñ Ì± ÖÚÚ, ÇÁÓÍÖ, ÍÖ ÁÚÍÁ ÌÈÈ, ÖÈÈ, Ì±ÍÖ, Ú±ÈÁ. Ú%ÁÚ Á, Ú±Ú, Ì± ÁÖÚ, Á Ö Á%ÚÖ ÁÈÈ%ÁÍÈÈ Ì±ÍÖ, Ö. ÈÈ. Ú%±, ÍÁÖ. ÍÖ, Ö ÖÖÖÖñÈÈÈ, É%ÁÓÍ±Á. á±ÍÁÚ ÚÁ, ÚÖ ÁÚÍÁ ÌÈÈ ÖÈÈ, Ì± ÍÁ Á±ÖÈÖ° ±ÁÚÖñ Ì± ÍÁÍÙÚ. ÖÓÍÈ Ç° ÍÁ ÍÖÈÁÚÁ ÖÍÙ±Ú, ÁÚÍÁ ÌÈÈ ÖÈÈ, Ì±, ÚÖ, Á ÈÚÁ "OFF", ÖÈÖÚÁÍÁ ÍÁÍ.

è ÈÌÄ±ÈÈÄ í ÈÈÈÈÈ±ÚÖ Ú ÖÖÚ±, ÁÈÈÈÈ ÍÁÍÙ° àì%ÈÈÈ±ÚÖ ÍÖÈÁÚ ÖÚÖ. ±È±Ú, Öñ ÍÁ ÚÖ°ÍÖ Á±ÈÈÈÈÖÚÈ ÖÚ ÍÁÍÙ. Ñ±ÈÁ ÁÓÍÈÈÈÈÈÈ±ÚÖ ÍÁ ÖÖñ, ÈÚÖñ, Ö, Áñ Ì±±ñ Á±ÖÈÖÈ, ÖÍ ÖÖñ, ÈÚÖñ Ì± ÍÁÓÍÖÍ, ÍÖ ÖÁÍÙÍ% ÖÖÁÈÁ.

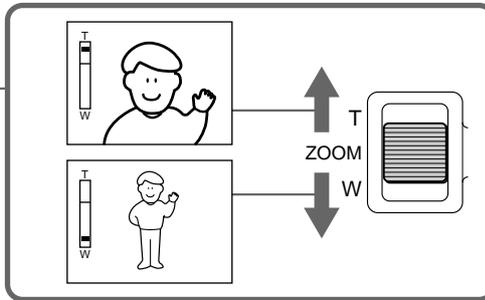
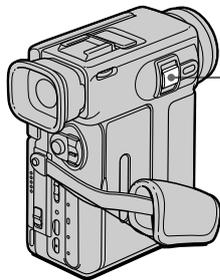
Using the zoom feature

Zooming is a recording technique that lets you change the size of the subject in the scene.

For more professional-looking recordings, use the zoom function sparingly.

“T” side: for telephoto (subject appears closer)

“W” side: for wide-angle (subject appears farther away)



Zooming speed (Variable speed zooming)

Press the power zoom switch a little for a relatively slow zoom; press it still more for a high-speed zoom. Zooming speed while the camcorder is in the Standby mode is faster than that in the recording mode making it easier to compose the scene.

When you shoot a subject using a telephoto zoom

If you cannot get a sharp focus while in extreme telephoto zoom, press the “W” side of the power zoom switch until the focus is sharp. You can shoot a subject that is at least about 80 cm (about 2 5/8 feet) away from the lens surface in the telephoto position, or about 1 cm (about 1/2 inch) away in the wide-angle position.

àÒÒÓÍ,ÁÓ,†ÌÈÄ ÙÛÌÍ·ÈÈ Ì†ÁÁ%†
,È%ÁÓÍ†ÌÄ °

ç†ÁÁ% ,È%ÁÓÍ†ÌÄ ° ñ,ÌñÁÙÒñ ÙÁÌÈ~ÀÒÌÈÌ
Ò ÈÁÌÓÍÁ†ÒÈÒÈ,ÍÓÚÓ °È ÓÓÁ,ÓÌñÁÙÇ†Ì
ÈÁÌÁÌñÚ, †ÁÌÄ °·ÁÌÚ†, Ì†%Á. ÑÌñ ·ÓÍÁÁ
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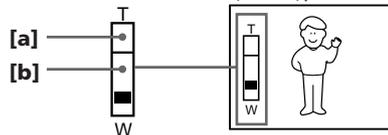
éÍÓ ÓÓÙ, Ì†ÁÁ%†,È%ÁÓÍ†ÌÄ ° (Ì†ÁÁ%
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·ÓÓÍÓÈÓÍÓ ÓÓÙÈ.éÍÓ ÓÓÙ, Ì†ÁÁ%†,ÍÓ,%†
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,ÓÓÓ,ÍÓÓÙÈ,·Ù%ÁÙ·ÓÙ ÁÁ,·ÁÌÓÍÓ ÓÓÙ,
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,ÓÁÌÓÈÌÓÓÙ, ·ÓÍÁÁ ÌÁ,ÌÒÈ ÌÓÍÓÓÍÓ,ÌÈ Ò·ÁÌ.

äÓ,%† Ç ° òÌÈ†ÁÙÁ Ó·ÁÌÚ, ÈÒÒÓÍ,ÁÙñ
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ÒÓÌÈ Ç ° ÌÁ ÌÓÈÁÙÁ ÓÓÌ·ÈÙ, ~ÁÙÍÓÈ
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ÓÓÙ ÓÌÚ·W%ÓÙÁ,ÓÓ, ÓÓÌ†Ç ° ÌÁ ÓÓÌ·ÈÙÁ
~ÁÙÍÓÈ ÙÓÍÓÈ Ó,ÌÈ. Ç ° ÌÓÈÁÙÁ òÌÈ†Ú,
Ó·ÁÌÚ, ÍÓÓÓ °È ÓÓ ÌÁÌ,·ÁÈ ÌÁ Á Ì† 80 ÒÌ
Ù%†ÌÁÌ ÓÙ ÓÓ,Á ÌÍÓÓÙÈ Ó·ÁÌÚÈ,†,
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È ÓÍÓ,Ó Ù,Ì†.

Camera recording

Notes on digital zoom

- More than 10x zoom is performed digitally, and the picture quality deteriorates as you go toward the "T" side. If you do not want to use the digital zoom, set the D ZOOM function to OFF in the menu system.
- The horizontal bar in the power zoom indicator separates the digital zooming zone (above the bar [a]) and the optical zooming zone (under the bar [b]). If you set the D ZOOM function to OFF, the part above the bar disappears.
- When using the digital zoom function, zooming power is up to 20x.



Shooting with the LCD screen

You can also record the picture while looking at the LCD screen.

When using the LCD screen, the viewfinder screen turns off automatically. You cannot monitor the sound from the speaker during recording.

(1) Open the LCD panel.

(2) Adjust angle of the LCD panel

The LCD panel moves about 90 degrees to this side and about 180 degrees to the other side.

To adjust the brightness of the LCD screen, press LCD BRIGHT.

+ side: to brighten the LCD screen

- side: to dim the LCD screen

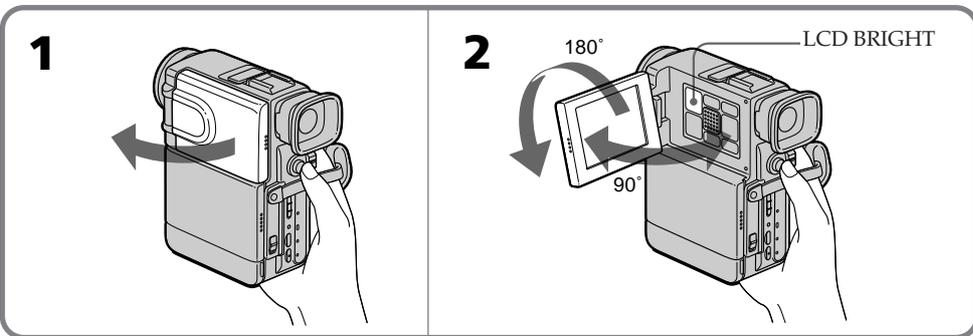
The battery life is longer when the LCD panel is closed. Use the viewfinder instead of the LCD screen to save the battery power.

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- í ±ÍÛÓÓÍ±ÛÓ ·ÓÍÄÄ, ÄÍ 10: ÖÓÄ%±Í, ÑË Ò ÓÍÛÓÓÍÄÍËË, È ±ÍÄÓÛ, Ö ÈÄÓ. ±ÈÄÍËñ ÛÍÛ%±ÄÛÓñ ÖÓ ÍÄ Ä Ç±Ä, Ö%ÈÈÄÍËñ ÖÛÓ ÓÍÛ "™". ÖÓÍË Ç" ÍÄ ÍÛÈÛÄ ÈÖÓÓÍ, ÄÓ, ±Û, ÑË Ò, ÖÈ Û ±ÍÛÓÓÍ±ÛÓ, ÛÓÛ±ÍÓ, ÈÛÄ ÛÛÍÍË, D ZOOM, ÖÈÓÛÄÍÄ ÍÄÍ, Ì± OFF.
- ÈÓ ÈÄÓÍÛ±Í ÌñÍÓÓÍÛ±ÍË%È±ÛÓ Ä ÖÈ, Ö%Ó, ÒÛ ±ÍÛÓÓÍ±ÛÓ ±±Ä%ÄñÄÛÄÓÍÛ ÑË Ò, ÖÈ Û ±ÍÛÓÓÍ±ËË (Ó Ä Û ÓÛ ÖÓÍÓÖ° [a]) ÈÖÓÛÈÄÓÍÈÛ ±ÍÛÓÓÍ±ËË (ÓÍÈÄÛÓÓÓÓÍÓÖ° [b]). ÖÓÍË Ç" ÛÓÛ±ÍÓ, ÈÛÄ ÛÛÍÍË, D ZOOM Ì± OFF, ÛÓ ±ÛÓ, Ö Ä ÛÓÛÓÓÍÓÖ° ÈÖ ÄÄÍÄÛ.
- È ÈÈÖÓÓÍ, ÄÓ, ±ÍËË ÛÛÍÍËË ÑË Ò, ÖÈ Û ±ÍÛÓÓÍ±ËË, Ì±ÛÍÓÓÛ, Û ±ÍÛÓÓÍ±ËË Û, ÄÍËÈ±ÄÛÓñ %Ö 20:.

è ÄÍÍ± ò ÈÖÓÓÍ, ÄÓ, ±ÍÈÄÍ
"Í ±Í± ÛÄñ

- Ç" ÍÛÈÄÛÄÛ±ÍÈÄ Ò ÖÈÄ, Ö%ÈÛ, Ä±ÖÈÖ, ÈÄÓ. ±ÈÄÍËñ, Ìñ%±Í Ì± "Í ±Í ÛÄñ.
- È ÈÈÖÓÓÍ, ÄÓ, ±ÍËË "Í ±Í± ÛÄñ "Í ±Í Ì± È%ÖÈÓÍ±ÛÄÍñ, "Í Ì±ÄÛÓñ ±, ÛÓÍ±ÛÈÈÄÓÍÈ. Ç" ÍÄ ÍÛÈÄÛÄ ÒÍ±Û, Ä, ÛÍ ÒÛ "ÓÍÓ, Ö, Ö ÈÛÄñ, Ö, Äñ Ä±ÖÈÈ.
- (1)** ÈÛÍ ÖÈÛÄ Ò±ÍÄÍ, ÛÄñ.
- (2)** ÈÛ Ä, ÛÍÈ ÛÈÛÄ Û, ÓÍ Ö±ÍÄÍÈ ÛÄñ. è±ÍÄÍ, ÛÄñ ÖÄ ÄÍÄ±ÄÛÓñ Ò È. ÍÈÈÈÛÄÍ Ì Ö Ì±90, ±%ÛÓÖ, Ö%ÄÛÓÓÛ ÓÍÛÈÖ È. ÍÈÈÈÛÄÍ, Í Ö Ì±180, ±%ÛÓÖ, %Û Û, ÛÓÛÓÍÛ. ÑÍñ Ä, ÛÍÈ Ö, ÍÈ Ì ÍÓÓÛÈ "Í ±Í± ÛÄñ Ì±ÈÈÛÄ LCD BRIGHT. èÛÓ ÓÍÛ ±: %±ñ ÖÓÍÛÄÍËñ ·ÓÍÄÄ Ì ÍÓ, Ò "Í ±Í± ÛÄñ èÛÓ ÓÍÛ -: ÑÍñ ÖÓÍÛÄÍËñ ·ÓÍÄÄ ÛÓÓÍÍÓ, Ö "Í ±Í± ÛÄñ è ÓÍ ÓÍÛÈ. Ä± Ì%±± ±Û± ÄÈÍÓ, Ö ·ÍÓÍ± ·Û%ÄÛ %±ÍÈÄÄ, ÍÓ, %±± Ö±ÍÄÍ, ÛÄñ Ä±Í ±Û±. äÖÓÓÍ ÄÛÈÛÄ, È%ÖÈÓÍ±ÛÄÍ, ÍÄÓÛÓ "Í ±Í± ÛÄñ %±ñ "ÍÓÍÓÍÈÈ Ä± Ì%±± ±Û± ÄÈÍÓ, Ö ·ÍÓÍ±.



Camera recording

á±ÔËÒ ò ôóíó~
,É%ÁÓí±íÁ °

Selecting the start/stop mode

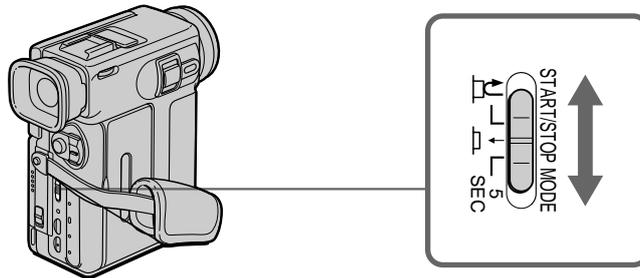
- ☰ : When you press START/STOP, the camcorder starts recording. When you press the button again, the camcorder stops recording. (factory setting)
- ⏏ : As long as you keep pressing START/STOP, the camcorder records. When you release the button, the camcorder stops recording.
- 5SEC**: When you press START/STOP, the camcorder records for 5 seconds and stops. (p. 33)

When you select ⏏ or **5SEC**, you cannot use the fade-in/fade-out function.
When you select **5SEC**, the remaining tape indicator is not displayed.

Ç°·Ó ÂËËí± Á±ÔÛÒí±/ÓÓÚ±ìó,±

- ☰ : äÓ,±%± Ç° ì±ËËí±ÁÚÁ START/STOP, É%ÁÓí±íÁ ± ì±ËËí±ÁÚ Á±ÔËÒ. äÓ,±%± Ç° ì±ËËí±ÁÚÁ °ÚÚ ììÓÓíÚ ÓÓííÚ, É%ÁÓí±íÁ ± ÓÓÚ±ì±,ìË,±ÁÚ Á±ÔËÒ. (á±,Ó%Óí±íí ÚÓÓ±ìó,ì±)
- ⏏ : èÓí± Ç° %Á ËËÚÁ START/STOP, ì±ËËí±ÁÚÓÓÓÓÚÓííË,É%ÁÓí±íÁ ± °ÓÓííííÁÚ Á±ÔËÒ. äÓ,±%± Ç° ÓÓÚÓÓí±ÁÚÁ ììÓÓíÚ,É%ÁÓí±íÁ ± ÓÓÚ±ì±,ìË,±ÁÚ Á±ÔËÒ.
- 5SEC**: äÓ,±%± Ç° ì±ËËí±ÁÚÁ START/STOP, É%ÁÓí±íÁ ± Ó ÓËÁ,Ó%ËÚÁ±ÔËÒ, ÚÁ°ìíËÁ5 ÓÁííÚ%Ë ÓÓÚ±ì±,ìË,±ÁÚÒíí. (ÓÓ . 33)

ÒÒíË Ç° ,°Ë ±ÁÚÁ ⏏ ËíË 5SEC, Ç° ìÁ ÓíÓËÁÚÁ ËÓÓÓí,ÁÓ,±Ú, ÚÚíí°Ë, „Á%ÁìËíí/ ,°Á%ÁìËíí ËÁÓ. ±ËÁìËíí.
äÓ,±%± Ç° ,°Ë ±ÁÚÁ 5SEC Ëì%Ëí±ÚÓ ÓÓÚ±,ÁËÓíí ìÁíí° ÓÓÓ. ±Ë±Ú,Óíí ìÁ·Ú%ÁÚ.



To attach an accessory

Attach an accessory (not supplied) to the accessory shoe.

Ñííí Ò Ëí ÁÔíÁìËíí %ÓÓÓÓííËÚÁí,ìó,,Ó Ó·Ó Ú%Ó,±ìËíí

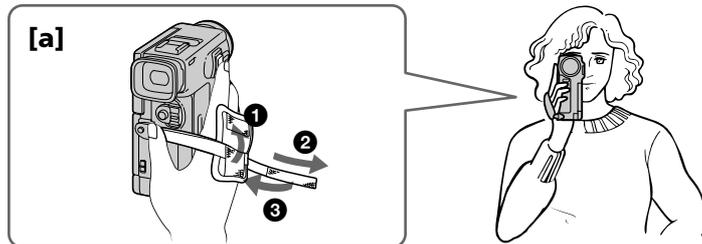
è Ëí ÁÔËÚÁ%ÓÓÓÓííËÚÁí,ìóÁÓ·Ó Ú%Ó,±ìËÁ (ìÁ Ò Ëí±,±ÁÚÒíí) í, °Ó%ÓÚ %ííí, ÓÓÓíó,±ÚÁí,ìó,,Ó Ó·Ó Ú%Ó,±ìËíí.

Hints for better shooting

éÓ,ÂÚ° %oÎfl îÛ~ÂÈ
 Ò·ÀÏË

For hand-held shots, you will get better results by holding the camcorder according to the following suggestions:

- Hold the camcorder firmly and secure it with the grip strap so that you can easily manipulate the controls with your thumb. **[a]**



- Place your elbows against your side.
- Hold the camcorder with your left hand to keep it steadier.
- Adjust the LCD panel angle.
- Keep your fingers away from the lens.
- Place your eye firmly against the viewfinder eyecup.
- Be sure not to touch the built-in microphone.
- Be sure not to touch the FOCUS button by accident.
- Use the LCD panel frame or the viewfinder frame as a guide to determine the horizontal plane.
- You can record in a low position to get an interesting recording angle. Lift the LCD panel up to record from a low position. **[b]**
- You can also record in a high position. Lift the LCD panel down to record from a high position. **[c]**

Ñífl í±%o Ó, Ò È Û%oÂ È±ÏËÈ, È%oÂÓÏ±ÏÂ °
 Úí±, Ç° ÓÓÏÛ~ÈÚÁ ÌÛ~ÈÁ ÁÁÚÏ, Ú±Ú°, ÀÒÏÈ
 ·Û%oÂÚÁ%oÂ È±Ú, È%oÂÓÏ±ÏÂ Û,ÓÓÓÚ,ÁÚÓÚ,ÈÈ
 ÓÓ ÓÏÁ%oÚ, °ÈÈÈ ÁÏÓÏÁ!%o±~ÈflÈÈ:
 • ÑÁ ÈÈÚÁ,È%oÂÓÏ±ÏÂ Úí ÁÓÏÓÈÁ±Ï ÁÓÈÚÁÁÁ
 Ó ÓÓÏÓ° ÁÏÁÏÏÓ,Ó Á±,±Ú± Ú±Ï, °ÚÓ° Ç°
 ÌÁ,ÏÓ ÌÓ,ÏÈ Ì±ÈÓÚÏÈ Ó,±Ú, Á,ÚflÚÓ ±ÏÈ Ó
 ÓÓÏÓ° ,.·ÓÏ,°Ó,Ó Ó±Ï,°±. **[a]**

- è±ÓÓÓÏÓÈÈÚÁ Ç±È ÌÓÏÏÈ ÓÓ ·ÓÏ± ÓÚ ÓÀ-fl.
- èÓ%oo%oÂ ÈÈ,±ÈÚÁ,È%oÂÓÏ±ÏÂ ÛÇ±~ÁÈÏÁ,ÓÈ
 ÚÏÓÈ, °ÚÓ° %oÂ È±Ú, ÁÁ·ÓÏÁÁ ÚÓÚÓÈ~È,Ó.
- èÚ Á,ÚÏÈ ÛÈÚÁ Û,ÓÏ Ó±ÏÁÏÈ ÚáÑ.
- ÑÁ ÈÈÚÁ Ç±È Ó±Ï °° ÓÓ%o±Ï °Á ÓÚ Ó·ÁÏÛÈ,±.
- Ç±%oÂÈÏÓ Ó ÈÓÏÓÏÈÚÁ Ç±,±± í ÓÏÏfl Û
 È%oÂÈÓÏ±ÚÁfl.
- ÇÈ, ÌÓÁÏ ÓÏÛ~±Á ÌÁ Ú Ó,±ÈÚÁ, ÓÚ ÓÁÏÈÈ
 ÌÈÏ ÓÚÓÏ.
- ÇÈ, ÌÓÁÏ ÓÏÛ~±Á ÌÁ %oÓÚ ÒÏ,ÚÁÒ, %oÓ ÌÏÓÏÈÈ
 FOCUS.
- áÓÓÓÏÏ ÁÚÈÚÁ,ÈÁÈ ÌÛ, ±ÏÏÛ Ó±ÏÁÏÈ ÚáÑ
 ,±~ÁÓÚ,Á ÚÏÓ,Ó%oÓÚ,±%ofl ÓÓ Á%oÁÏÈÈfl
 „Ó ÈÁÓÏÛ±Ï,Ï,Ó ÓÏ±Ï.
- Ç° ÌÓÈÁÚÁ Á±ÓÈÓ° ±Ú, ÈÁ ÌÈÁÏÓ,Ó
 ÓÓÏÓÈÁÏÈÈfl %ofl ÓÓÏÛ~ÁÏÈÈ fl ÈÏÚÁ ÁÓÏÓ,Ó Û,±
 Á±ÓÈÓÈ. èÓ%oÁÈÏÈÚÁ Ó±ÏÁÏ, ÚáÑ „,Á Ì %ofl
 Á±ÓÈÓÈÈÁÏÈÁÏÓ,ÓÓÓÏÓÈÁÏÈÈfl. **[b]**
- Ç° ÌÓÈÁÚÁ Û±ÏÈÁ Á±ÓÈÓ° ±Ú, ÈÁ °ÓÓÏÓ,Ó
 ÓÓÏÓÈÁÏÈÈfl. èÓ,Á ÌÈÚÁ Ó±ÏÁÏ, ÚáÑ ,ÏÈÁ
 %ofl Á±ÓÈÓÈÈÈÁ,°ÓÏÓ,ÓÓÓÏÓÈÁÏÈÈfl. **[c]**



Continued to the next page

è Ó%oÓÏÈ±ÁÚÒfl Ì±ÓÏÁ%oÚ,~ÁÈÈ ÓÚ ±ÏÈ~Á

Playing back a tape

Παίζοντας ταινία

You can monitor the playback picture on the LCD screen or in the viewfinder.

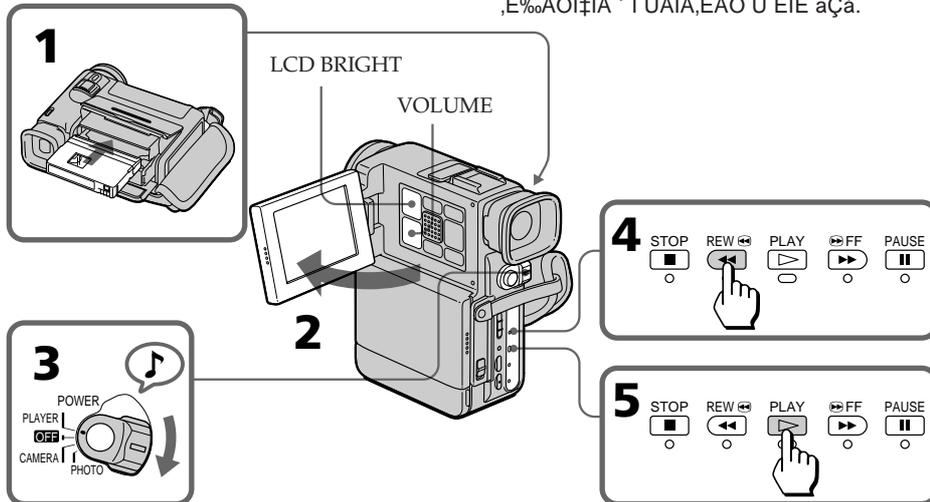
- (1) Insert the recorded tape with the window facing out.
- (2) Open the LCD panel.
- (3) While pressing the small green button on the POWER switch, set it to PLAYER. The tape transport buttons light up.
- (4) Press ◀ to rewind the tape.
- (5) Press ▶ to start playback.
- (6) Adjust the volume using VOLUME +/- and the brightness of the LCD screen using LCD BRIGHT +/-.

You can also monitor the picture on a TV screen, after connecting the camcorder to a TV or VCR.

Μπορείτε να παρακολουθήσετε την εικόνα στην οθόνη LCD ή στο οπίσθιο φακό.

- (1) Εισάγετε την ηχογραφημένη ταινία με το παράθυρο να είναι προς τα έξω.
- (2) Ανοίξτε το LCD.
- (3) Πατώντας το μικρό πράσινο κουμπί που βρίσκεται στο διακόπτη ΠΡΟΒΟΛΕΥΣΗΣ, θέστε τον διακόπτη στην κατάσταση ΠΑΡΑΒΟΛΗΣ. Τα κουμπιά μεταφοράς ταινίας ανάβουν.
- (4) Πατήστε ◀ για να επαναπολιτίστε την ταινία.
- (5) Πατήστε ▶ για να ξεκινήσετε την αναπαραγωγή.
- (6) Ρυθμίστε τον ήχο χρησιμοποιώντας τα κουμπιά VOLUME +/- και το φωτισμό της οθόνης LCD χρησιμοποιώντας LCD BRIGHT +/-.

Μπορείτε επίσης να παρακολουθήσετε την εικόνα στην οθόνη τηλεόρασης, αφού συνδέσετε την κάμερα σε τηλεόραση ή VCR.



- To stop playback, press ■.
- To rewind the tape, press ◀.
- To fast-forward the tape rapidly, press ▶▶.

Using the Remote Commander

You can control playback using the supplied Remote Commander. Before using the Remote Commander, insert the R6 (size AA) batteries.

To display the LCD screen/viewfinder screen indicators

- Press DISPLAY.
- To erase the indicators, press again.

- Να σταματήσετε την αναπαραγωγή, πατήστε ■.
- Να επαναπολιτίσετε την ταινία, πατήστε ◀.
- Να προπομάτε την ταινία γρήγορα, πατήστε ▶▶.

Μπορείτε να ελεγχείτε την αναπαραγωγή χρησιμοποιώντας τον παρεχόμενο τηλεχειριστήριο. Πριν χρησιμοποιήσετε το τηλεχειριστήριο, εισάγετε τις μπαταρίες R6 (τύπου AA).

- Να εμφανίσετε την οθόνη LCD/οπίσθιο φακό, πατήστε DISPLAY.
- Να σβήσετε τα δείγματα, πατήστε ξανά.

Playing back a tape

Using headphones

Connect headphones (not supplied) to the AUDIO VIDEO OUT/ jack (p. 83). You can adjust the volume of the headphones using VOLUME +/-.

To view the playback picture in the viewfinder

Close the LCD panel. The viewfinder turns on automatically.

When using the viewfinder, you can monitor the sound only by using headphones.

To view on the LCD screen again, open the LCD panel. The viewfinder turns off automatically.

Various playback modes

To view a still picture (playback pause)

Press **II** during playback. To resume playback, press **II** or **▷**.

To locate a scene (picture search)

Keep pressing **◀◀** or **▶▶** during playback. To resume normal playback, release the button.

To monitor the high-speed picture while advancing the tape or rewinding (skip scan)

Keep pressing **◀◀** while rewinding or **▶▶** while advancing the tape. To resume normal rewinding or fast-forward, release the button.

To view the picture at 1/3 speed (slow playback)

Press **▶** on the Remote Commander during playback. For slow playback in reverse direction, press **<**, then press **▶**. To resume normal playback, press **▷**.

To view the picture at double speed

For double speed playback in the reverse direction, press **<**, then press **×2** on the Remote Commander during playback. For double speed playback in the forward direction, press **>**, then press **×2** during playback. To resume normal playback, press **▷**.

ÇÒÒÒ ÓĒÁ,Â%ÂÌĒÂ ÎÂÏÚ°

àÒÒÒĪ,ÁÓ,±ĪĒÂ „ÓĪÓ,Ī°Ī, ÚÂĪÂÏÚÓĪÓ,
èÓ%ÓÓÂ%ĒĪĒÚÂ „ÓĪÓ,Ī°Ī ÚÂĪÂÏÚÓĪ° (ĪÂ
Ó ĒĪ,± ÚÓĪ) Ī „ĪÂÂ%Ú AUDIO VIDEO OUT/ (Ī
(ÓÚ, 83).Ç° ÓĪÓĒÁÚÂ Â,ÚĪĒ Ó,±Ú,
„ ÓĪÓÓÚ, „ÓĪÓ,Ī°Ī ÚÂĪÂÏÚÓĪÓ, ò ÓÓĪÓ°
VOLUME +/-.

ŊĪĪ, ÓÒÒ ÓĒÁ,Â%ÂÌĒĪĪ ĒÁÓ· ±ĒÂĪĒĪĪ ,
Ē%ÓĒĪÓĪ±ÚÂĪÂ
á±Ī ÓĒĒÚÂ Ó±ĪÂĪ, ÚāŊ. ÇĒ%ÓĒĒÓĪ±ÚÂĪ,
ĪĪ, ĒĒÚÓĪĪ ±,ÚÓĪ±ÚĒĒ-ÂÓĪĒĒ.
è ĒĒÓÓĪ,ÁÓ,±ĪĒĒĒ,Ē%ÓĒĒÓĪ±ÚÂĪĪ Ç° ĪÓĒÁÚÂ
ÓĪÚ-±Ú, Â,ÚĪ ÚÓĪ,ĪÓ ò ÓÓĪÓ° „ÓĪÓ,Ī°Ī
ÚÂĪÂÏÚÓĪÓ, ŊĪĪ Ò ÓÓĪÓÚ ± Ī± ĪĪÂ ÚāŊ
ÓĪÓ,± ÚÓĪ ÓĒĒÚÂ Ó±ĪÂĪ, ÚāŊ. ÇĒ%ÓĒĒÓĪ±ÚÂĪ,
ĪĪ, ĒĒÚÓĪĪ ±,ÚÓĪ±ÚĒĒ-ÂÓĪĒĒ.

è±ĪÂĪĒĒĒ°Ī ÂĒĒĒĒ°,ÓÒÒ ÓĒÁ,Â%ÂÌĒĒĪ

ŊĪĪ Ó ÓÓĪÓÚ ± ĪÂÓÓ%ĒĒĒÓ Ó
ĒÁÓ· ±ĒÂĪĒĪĪ (Ó±ÚÂ±, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ)
ç±ĒĒĒÚÂ ĪĪ, Ó, ÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ. ŊĪĪ
„ÓÓÚ±ĪÓ,ĪÂĪĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ Ī±ĒĒĒÚÂ ĪĪ
ĒĒĒ ▷.

ŊĪĪ Ó-± ÚĒĒĒĪĪĪ Ò ±,ĪÂĪÚ± (ÓÓĒĒÓĪ
ĒÁÓ· ±ĒÂĪĒĪĪ)
ŊÂĒĒÚÂ Ī±ĒĒÚÓĒĒ ĪĪÓÓĪÚ. ◀◀ ĒĒĒ ▶▶, Ó
ĪĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ. ŊĪĪ, ÓÓÓÚ±ĪÓ,ĪÂĪĪĪ
ĪÓ Ī±Ī,ĪÓ,Ó,ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪÓÚÓÚÓÚĒÚÂ
ĪĪÓÓĪÚ.

ŊĪĪ ĪÓĪÚ ÓĪĪĪ ĒÁÓ· ±ĒÂĪĒĪĪĪ Ī±
°ÓÓĪÓĒ ÓĪÓ ÓÓÚĒĒ, Ó, ÂĪĪ
ÚÓĪÓ ÂĪĪÓĒ ÓÂĪ ÓĪÓĪĒĒ ĪÂĪÚ°, ÓÂ Â%
ĒĒĒ Ī±Â±% (ÓÓĒĒÓĪ ĪÂÚÓ%ÓĪ Ó Ó ÓĪ±)
ŊÂĒĒÚÂ Ī±ĒĒÚÓĒĒ ĪĪÓÓĪÚ ◀◀, Ó, ÂĪĪ
ÓÂĪ ÓĪÓĪĒĒ ĪÂĪÚ° Ī±Â±% ĒĒĒ ĪĪÓÓĪÚ ▶▶, Ó
, ÂĪĪ ÓÂĪ ÓĪÓĪĒĒ ĪÂĪÚ°, ÓÂ Â%. ŊĪĪ
„ÓÓÓÚ±ĪÓ,ĪÂĪĪĪĪ ĪÓ Ī±Ī,ĪÓĒ ÓÂĪ ÓĪÓĪĒĒ
„ÓÂ Â%ĒĒĒĪ±Â±%ÓÚÓÚÓÚĒÚĒĪĪÓÓĪÚ.

ŊĪĪ Ó ÓÓĪÓÚ ± ĒÁÓ· ±ĒÂĪĒĪĪĪ Ī± 1/3
ÓĪÓ ÓÓÚĒĒ (Â±ĪÂ%ĪÂĪĪÓÂ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ)
ç±ĒĒĒÚÂ ▶▶ Ī± ÓÚĪ, ÚÂ %ĒÓÚ±ĪĒĒÓĪÓ, Ó
ÚÓ ±ĪÂĪĪĪ, Ó, ÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ. ŊĪĪ
Â±ĪÂ%ĪÂĪĪÓ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ, Ó-±ÚĪÓĪ
Ī±Ó ±ĪÂĪĒĒĒ Ī±ĒĒĒÚÂ <, ±Ī±ÚÂĪ ▶▶. ŊĪĪ
„ÓÓÓÚ±ĪÓ,ĪÂĪĪĪĪ ĪÓ Ī±Ī,ĪÓ,Ó
„ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪĪĪ±ĒĒĒÚÂ ▷.

ŊĪĪ Ó ÓÓĪÓÚ ± ĒÁÓ· ±ĒÂĪĒĪĪĪ Ò
Ú%Ē, ÓÂĪĪÓĒ ÓĪÓ ÓÓÚ
ŊĪĪÚ%Ē, ÓÂĪĪĪĪÓĪÓ ÓÓÚĒĒ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ,
Ó-±ÚĪÓĪ Ī±Ó ±ĪÂĪĒĒĒ Ī±ĒĒĒÚÂ <, ±Ī±ÚÂĪ
Ī±ĒĒĒÚÂ ×2 Ī± ÓÚĪ, ÚÂ %ĒÓÚ±ĪĒĒÓĪÓ, Ó
ÚÓ ±ĪÂĪĪĪ, Ó, ÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ. ŊĪĪ
Ú%Ē, ÓÂĪĪĪĪÓĪÓ ÓÓÚĒĒ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ,
Ī±Ó ±ĪÂĪĒĒĒ, ÓÂ Â%Ē Ī±ĒĒĒÚÂ >, ±Ī±ÚÂĪ
Ī±ĒĒĒÚÂ ×2, Ó, ÂĪĪ, ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪ. ŊĪĪ
„ÓÓÓÚ±ĪÓ,ĪÂĪĪĪĪ ĪÓ Ī±Ī,ĪÓ,Ó
„ÓÓÓ ÓĒÁ,Â%ÂÌĒĪĪĪĪ±ĒĒĒÚÂ ▷.

Searching for the end of the picture

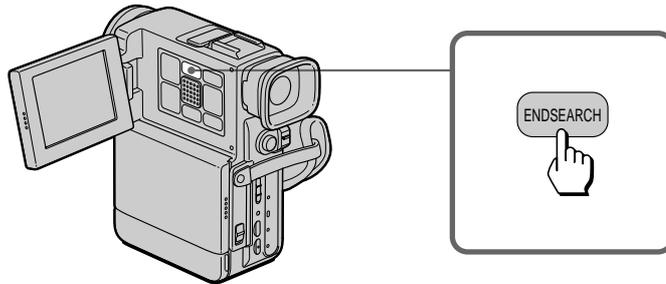
èÓËÒÍ ÍÓÌ`‡
ÈÁÓ· ‡ÈÀÌÈfl

You can go to the end of the recorded portion after you record and play back the tape. The tape starts rewinding or fast-forwarding and the last about 5 seconds of the recorded portion plays back. Then the tape stops at the end of the recorded picture (**End Search**).

Open the LCD panel and press END SEARCH during recording standby. This function works when the POWER switch is set to CAMERA, PLAYER or PHOTO.

Ç° ÌÓÈÁÚÁ ÒÁ ÆÈÚÈ Í ÍÓÌ`Ú Á‡ÔÈÒ‡ÌÍÓÈ
‡ÔÚÈÓÓÓÍÁÁ‡ÔÈÓÈÈ,ÓÓÓ ÓÈÁ,Â%ÀÌÈfl
ÌÁÌÚ°. àÁÌÚ‡ Ì‡ÈÌ‡ÁÚ ÓÁ ÁÌ‡Ú°,‡Ú,Òfl
Ì‡Á‡%ÈÈÈ,ÓÁ Á%,È Ò È.ÌÈÁÈÚÁÌ,ÌÓ
ÓÓÓÍÁ%ÌÈÁ5ÓÁÌÚ%Á‡ÔÈÒ‡ÌÍÓÈ‡ÓÚÈ.Ú%ÚÚ
,ÓÓÓ ÓÈÁ,Â%ÀÌÈ. à‡ÚÁÌ ÍÁÌÚ‡ ÓÓÚ‡ÌÓ,ÈÚÓfl,
ÍÓÌ`Á Á‡ÔÈÒ‡ÌÍÓ,Ó ÈÁÓ· ‡ÈÀÌÈfl (ÓÓÈÓÍ
ÍÓÌ`‡).

éÚÍ ÓÈÚÁ Ò‡ÌÁÌ, ÚāÑ È Ì‡ÈÌÈÚÁ END
SEARCH.
Ñ‡Ì‡fl ÚÚÌÍÈfl ‡.ÓÚ‡ÁÚ, ÍÓ,%‡
,ÍÌ ‡ÚÁÌ. POWER ÚÓÚ‡ÌÓ,ÌÁÌ ÌÈ.Ó ,
ÓÓÍÓÈÁÌÈÁ CAMERA, PLAYER ÈÌÈ PHOTO.



Note on End Search

The End Search function does not work once you have ejected the cassette after you recorded in the tape or if you do not record after you have inserted a tape.

è ÈÌÁ‡ÌÈÁ Í ÚÚÌÍÈÈ ÓÓÈÓÍ‡ ÍÓÌ`‡
ÌÚÌÍÈfl ÓÓÈÓÍ‡ Á‡ÔÈÒÈÈ ÌÁ ‡.ÓÚ‡ÁÚ, ÁÓÍÈ Ç°
,ÚÓÍÌÍÚÍÈ Ì‡ÓÓÁÚÚ ÓÓÓÍÁ, °ÓÓÌÁÌÈfl
Á‡ÔÈÒÈ Ì‡ ÍÁÌÚÚ, ÈÌÈ ÁÓÍÈ Ç° ÌÁ Ó ÓÈÁ,ÁÌÈ
Á‡ÔÈÒ, ÓÓÓÍÁ,ÓÚ‡,ÌÈ ÌÁÌÚ°.

Advanced operations

Using alternative power sources

You can choose any of the following power sources for your camcorder: battery pack, mains, and 12/24 V car battery. Choose the appropriate power source depending on where you want to use your camcorder.

Place	Power source	Accessory to be used
Indoors	Mains	Supplied AC power adaptor
Outdoors	Battery pack	Battery pack NP-F100 (supplied), NP-F200
In the car	12 V or 24 V car battery	Sony car battery charger DC-V515

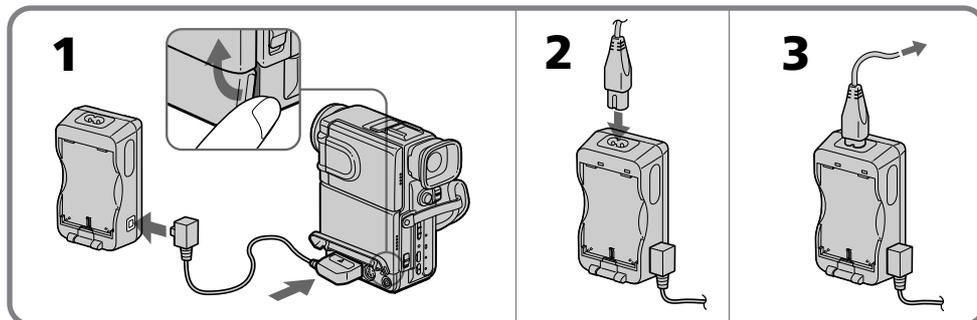
Note on power sources

Disconnecting the power source or removing the battery pack during recording or playback may damage the inserted tape. If this happens, restore the power supply again immediately.

Using the mains

To use the supplied AC power adaptor:

- (1) Open the jack cover and connect the connecting plug on the camcorder to the DC OUT jack on the AC power adaptor using the supplied connecting cord.
- (2) Connect the mains lead to the AC power adaptor.
- (3) Connect the mains lead to mains.



Continued to the next page

Advanced operations

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In the car	12 V or 24 V car battery	Sony car battery charger DC-V515

Disconnecting the power source or removing the battery pack during recording or playback may damage the inserted tape. If this happens, restore the power supply again immediately.

Using the mains

To use the supplied AC power adaptor:

- (1) Open the jack cover and connect the connecting plug on the camcorder to the DC OUT jack on the AC power adaptor using the supplied connecting cord.
- (2) Connect the mains lead to the AC power adaptor.
- (3) Connect the mains lead to mains.

Continued to the next page

Using alternative power sources

àÒÒÓÍ ÁÓ, ±ÌÈÁ ±Í ÚÂ Ì±ÚÈ, Ì, ÈÓÚÓ~ÌÈÍÓ, ÒÈÚ±ÌÈÍ

Charging the battery pack

You can charge the battery pack installed in the camcorder by connecting the AC power adaptor to the camcorder and setting the POWER switch to OFF. The CHARGE lamp lights up, and goes out when normal charge is completed. For a full charge, leave the battery pack in place for approximately one hour. Charging time of the supplied NP-F100 battery pack is as follows:
Full charge: approx. 2 hours and 30 minutes
Normal charge: approx. 1 hours and 30 minutes

Charging two battery packs at the same time

Install one battery pack in the camcorder and another one on the AC power adaptor. The CHARGE lamps on the camcorder and on the AC power adaptor light up, and go out when normal charge is completed. For a full charge, leave the battery pack in place for approximately one hour. If either of the CHARGE lamps remains lit, charging both battery packs is not completed. Time taken to charge two NP-F100 battery packs simultaneously is as follows:
Full charge: approx. 2 hours and 40 minutes
Normal charge: approx. 1 hours and 40 minutes

Notes on the CHARGE lamp

- The CHARGE lamp will remain lit for a while even if the unit is unplugged after use. This is normal.
- If the CHARGE lamp does not light, disconnect the mains lead. After about one minute, reconnect the mains lead.

á± ñ%óÍ± ·±Ú± ÁÈÌÓ, Ò ·ÌÓÍ± Ç° ÌÒÈÁÚÁ Á± ñÈ±Ú, ÚÓÚ±ÌÓ, ÌÁÌÈÈ Ì± Ì±ÌÁ Á ·±Ú± ÁÈÌÈÈ ·ÌÓÍ ÓÚÚÁÌ ÓÓ%ÓÓÁ%ÈÌÈÈÒÁÚÁ, Ç±±ÓÚÁ ±ÒÁ ÁÌ. ÚÓÍ± Ì, È%ÁÓÍ±ÌÁ Á È ÚÓÚ±ÌÓ, ÌÈ ±Í ±ÚÁÌñ POWER, ÒÓÌÒÈÁÌÈÁ OFF. ±±ÌÒÓ~ÌÈÍ CHARGE ·Ú%ÁÚ, Ó ÁÚ, È ÓÓ, ±ÒÌÁÚ, ÌÓ, %± ÌÓ Ì± Ìñ Á± ñ%óÍ± ·Ú%ÁÚ Á±, Á ·ÁÌ±. ÑÌñ ÓÓÌÒÈ Á± ñ%óÍÈ ÓÓÚ±, ÚÁ ·±Ú± ÁÈÌÈÈ ·ÌÓÍ Ì± ÌÁÓÚÁ Ó È·ÈÁÈÚÁÌ, ÌÓ Ì± Ó%ÈÌ ±±Ò. Ç ÁÌñ Á± ñ%óÍÈ Ó ÈÌ±, ±ÁÌÓ, Ó ·±Ú± ÁÈÌÓ, Ó ·ÌÓÍ± NP-F100 ·Ú%ÁÚ ÓÌÁ%Ú, ·ÈÌ: èÒÌ±ñ Á± ñ%óÍ±: Ó È·ÈÁ. 2 ±Ò± 30 ÌÈÌÚÚ ÇÓ Ì± Ìñ Á± ñ%óÍ±: Ó È·ÈÁ. 1 ±Ò± 30 ÌÈÌÚÚ

á± ñ%óÍ± %Ú, ÚÌ ·±Ú± ÁÈÌÈÈ ·ÌÓÍÓ, Ó%ÓÌÓ, ÁÌÁÌÒ ÌÓÚ±ÌÓ, ÈÚÁ Ó%ÈÌ ±±Ú± ÁÈÌÈÈ ·ÌÓÍ, È%ÁÓÍ±ÌÁ Ú, ±ÚÓ ÓÈÌ±ÒÁÚÁ, ÓÈ±±%±ÓÚÁ ÓÁ ÁÌ. ÚÓÍ±. ±±ÌÒÓ~ÌÈÍ CHARGE Ì± È%ÁÓÍ±ÌÁ ÁÈÌÈÈÒÁÚÁ, ÓÌ±±ÓÚÁ ÁÒÁ ÁÌ. ÚÓÍ± ·Ú%ÁÚ, Ó ÁÚ ÈÓÓ, ±ÒÌÚÚ, ÌÓ, %± ÌÓ Ì± Ìñ Á± ñ%óÍ± ·Ú%ÁÚ Á±, Á ·ÁÌ±. ÑÌñ ÓÓÌÒÈ Á± ñ%óÍÈ ÓÓÚ±, ÚÁ ·±Ú± ÁÈÌÈÈ ·ÌÓÍ Ì± ÌÁÓÚÁ Ó È·ÈÁÈÚÁÌ, ÌÓ Ì± Ó%ÈÌ ±±Ò. ÓÒÌÈ Ó%óÍ± ÈÁ %Ú, Ì± Ì±ÌÒÓ~ÁÌ CHARGE ÓÓÚ±ÁÚÒñ, Ó ÁÚ, ÚÓ Á± ñ%óÍ± Ó·ÓÈÌ ·±Ú± ÁÈÌÈÈ ·ÌÓÍÓ, ÌÁ Á±, Á ·ÁÌ±. Ç ÁÌñ %óÍñ Á± ñ%óÍÈ %Ú, ÚÌ ·±Ú± ÁÈÌÈÈ ·ÌÓÍÓ, NP-F100 ·Ú%ÁÚ ÓÌÁ%Ú, ·ÈÌ: èÒÌ±ñ Á± ñ%óÍ±: Ó È·ÈÁ 2 ±Ò± 40 ÌÈÌÚÚ ÇÓ Ì± Ìñ Á± ñ%óÍ±: Ó È·ÈÁ 1 ±Ò± 40 ÌÈÌÚÚ

è ÈÌÁ~±ÌÈñ Ì Ì±ÌÒÓ~ÌÁ CHARGE

- ±±ÌÒÓ~ÌÈÍ CHARGE ·Ú%ÁÚ ÓÓÚ±, ±Ú Óñ, Ó ñ·ÁÈ Á·Á, ÚÁ·ÁÌÈÁ ÌÁÌÓÚÓ Ó, Ó, ÁÌÁÌÈ, %±±ÈÁÁÒÈ±±ÒÓ± ±ÚÓÚÓÓÁ%ÈÌÁÌÓÚÓÁÚÈ ÓÓÓÌÁ ÈÓÓÓÌ, ÁÓ, ±ÌÈñ. ùÓÓ ñ, ññÁÚÓñ ÌÓ Ì± Ì Ì Ì.
- ÓÒÌÈ±ÌÒÓ~ÌÈÍ CHARGE ÌÁ, Ó ÈÚ, ÚÓÓÓÁ%ÈÌÈÚÁ Ó Ó, Ó%Ó ÌÁÌÚ ÓÓÈÚ±ÌÈñ. è È·ÈÁÈÚÁÌ, ÌÓ ·Á ÁÁÓ%ÚÌÈÌÚÚÓÌÓ, ±ÒÓ%ÓÓÁ%ÈÌÈÚÁ Ó Ó, Ó%Ó ÌÁÌÚ ÓÓÈÚ±ÌÈñ.

To remove the connecting cord

While pressing the button on the connecting plug, pull out the connecting cord. Never pull the connecting cord itself. When you use the AC power with the connecting cord, the battery pack installed in the camcorder is not used because the AC power has priority over the battery pack.

WARNING

The mains lead must only be changed at a qualified service shop.

PRECAUTION

The set is not disconnected from the AC power source (mains) as long as it is connected to the mains, even if the set itself has been turned off.

Using a car battery

Use a car battery charger such as Sony DC-V515 (not supplied). Connect the car battery cord to the cigarette lighter socket of a car (12 V or 24 V). Connect the car battery charger and the camcorder using the supplied DK-626 connecting cord.

Note on the battery pack

You cannot charge the battery pack (NP-F100, NP-F200) using the car battery charger DC-V515.



This mark indicates that this product is a genuine accessory for Sony video product. When purchasing Sony video products, Sony recommends that you purchase accessories with this "GENUINE VIDEO ACCESSORIES" mark.

Νίη òηηÚÈη òÓÀ%ÈiÈÚÁi ió,ó ηiÚ ± ç±ÈÈiη ηiÓiÚ i± òÓÀ%ÈiÈÚÁi ióí ±Á·ÁiÁ, °Ú±ÈÚÁ òÓÀ%ÈiÈÚÁi,ìÈ ηiÚ . çÈiÓ,,%± iÁ ÚηiÈÚÁ Á± Ó±i ηiÚ . àÓ,%±ÇÈòòÓi,ÁÚÁÁÓÁÚÁ,ÓÈ±%±ÓÚÁ ÓÁ Ái. ÚÓi±,iÁÓÚÁ ò òÓÀ%ÈiÈÚÁi i'í ηiÚ Ói, .±Ú± ÁÈi'È ·iÓi, ÚÓÚ±iÓ,iÁiì'È , È%ÁÓi±iÁ ÁiÁ ·Ú%ÁÚÈòòÓi,ÁÓ,±Ú Óη,Ú±i ±iÓÁÚÁ,ÓÈ±%±ÓÚÁ ÓÁ Ái.ÚÓi±ÈiÁÁÚ ÓÈÓÈÚÁÚÓÁ Á%·±± ÁÈi'í·iÓiÓi.

èèÖÑìèèÖÜÑçàÖ èÁÚÁ,ÓÈ ò Ó,Ó% %·ÓiÈÁi .°Ú, Á±iÁiÁi ÚÓi,ió , i±òÚÁ òiÓÈ È,i±iÈÚÈ'È Ó,±iÓ,ó Ó·ÓiÚÈÈ,±iÈη.

èèÖÑèèiÖèÖÜçàÖ ÁÓò± ±Ú iÁ ÓÚiì,±ÁÚÓη ÓÚ ÈòÚó·iÈi± ÒÈÚ±iÈηÓÁ Ái.ÚÓi± (iÁiÚ È·ÁiÓiÈòÁÚÈ)%·Ó ÚÁi ÓÓ , ÓÓi± òi òÓ%iì,·Ái i iÁiÚ È·ÁiÓiÈ òÁÚÈ, %±ÈÁ ÁòiÈ ò±i ±òò± ±Ú ,°iì·Ái.

àòòÓi,ÁÓ,±iÈÁ ±iíÚiÚiηÚÓ iÓÈ ±Ú± ÁÈ

àòòÓi,ÁÚÈÚÁ Á± η%i'È ,°ò ηiÈÚÁi, ±iíÚiÚiηÚÓ iÓÈ ·±± ÁÈ, i±i ±ò ÈiÁ , Sony DC-V515(iÁò Èi±,±ÁÚÓη)èÓ%òÓÁ%ÈiÈÚÁ ηiÚ ±,ÚÓiÓ·Èi,iÓ,ó ±iíÚiÚiηÚÓ ± i ,iÁÁ%òÚ ÓÈ,± ÁÚiÓ,ó ò ÈiÚ È,±ÚÁiη ±,ÚÓiÓ·Èiη (12 Ç ÈiÈ 24 Ç). èÓÁ%ÈiÈÚÁ Á± η%i'È ,°ò ηiÈÚÁi, ±,ÚÓiÓ·Èi,iÓ,ó ±iíÚiÚiηÚÓ ± È,È%ÁÓi±iÁ Ú,ÈòòÓi,ÁÚη ò Èi±,±Ái'È òÓÁ%ÈiÈÚÁi,ìÈ ηiÚ DK-626.

è ÈiÁ·±iÈÁ i ·±Ú± ÁÈiòiÚ ·iÓiÚ Ç iÁ iÓÈÁÚÁ Á± η%ÈÚ, ·±Ú± ÁÈi'È ·iÓi (NP-F100, NP-F200) ò ÈòòÓi,ÁÓ,±iÈÁi Á± η%i'Ó,ó ,°ò ηiÈÚÁiη ±,ÚÓiÓ·Èi,iÓ,ó ±iíÚiÚiηÚÓ ± DC-V515.



ç±òÚÓη'ÈÈ Ái±i Úi±Á,±ÁÚ, ηÚÓ %±i±η ò Ó%Úi'Èη η,ηηÁÚÓη òÓ%iÈiÓÈ ò Èi±%iÁÈiÓÓÚ, È%ÁÓò Ó%Úi'ÈÈ Sony. òòiÈÇ° òÓiÚò±ÁÚÁÈ%Áòò Ó%Úi'È Sony, ÚÓ i° ÁiÓiÁi%ÚÁi, ηÚÓ· Ç° òÓiÚò±iÈ ò Èi±%iÁÈiÓÓÚÈ, òÓiÁ·Áiì·Á Ái±iÓi "GENUINE VIDEO ACCESSORIES".

Changing the mode settings

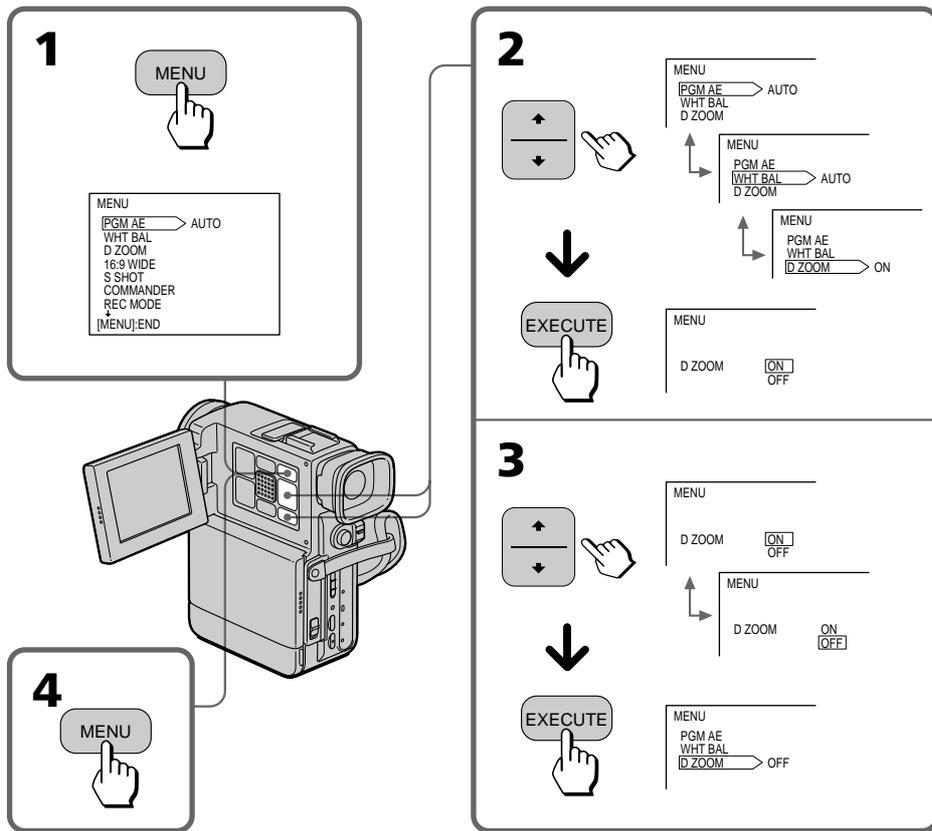
Αλλάζοντας τις ρυθμίσεις λειτουργίας

You can change the mode settings in the menu system to further enjoy the features and functions of the camcorder.

Μπορείτε να αλλάξετε τις ρυθμίσεις λειτουργίας στο μενού για να απολαύσετε περισσότερο τις λειτουργίες και τα χαρακτηριστικά της βινταγιέρας.

- (1) Press MENU to display the menu on the LCD screen.
- (2) Press \downarrow or \uparrow to select the desired item, then press EXECUTE. Only the selected item is displayed.
- (3) Press \downarrow or \uparrow to select the desired mode, then press EXECUTE. If you want to change the other modes, repeat steps 2 and 3.
- (4) Press MENU to erase the menu display.

- (1) Πατήστε το κουμπί MENU για να εμφανιστεί το μενού στην οθόνη LCD.
- (2) Πατήστε \downarrow ή \uparrow για να επιλέξετε το επιθυμητό αντικείμενο, στη συνέχεια πατήστε το κουμπί EXECUTE. Μόνο το επιλεγμένο αντικείμενο θα εμφανιστεί.
- (3) Πατήστε \downarrow ή \uparrow για να επιλέξετε τον επιθυμητό τρόπο λειτουργίας, στη συνέχεια πατήστε το κουμπί EXECUTE. Εάν θέλετε να αλλάξετε άλλους τρόπους λειτουργίας, επαναλάβετε τα βήματα 2 και 3.
- (4) Πατήστε το κουμπί MENU για να σβήσει το μενού στην οθόνη LCD.



Note on changing the mode settings

Menu items differs depending on the setting of the POWER switch to PLAYER or CAMERA/PHOTO.

Selecting the mode setting of each item

Items for both CAMERA/PHOTO and PLAYER modes

COMMANDER <VTR4/OFF/ID/ID SET>

- Select VTR4 when using the supplied Remote Commander for the camcorder.
- Select OFF when not using the Remote Commander.
- Select ID when using the Remote Commander set to the ID number.
- Select ID SET when setting the ID number to the Remote Commander.

REC MODE <SP/LP>

- Select SP when recording in SP (standard play) mode.
- Select LP when recording in LP (long play) mode.

BEEP <ON/OFF>

- Select ON so that beeps sound when you start/stop recording, etc.
- Select OFF when you do not want to hear the beep sound.

LCD COLOUR

Select this item and change the level of the indicator by pressing + or - to adjust the colour intensity of the picture.

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 ÄÈÈIÓ,
 ìÒÙ±IÓ,ÍÈ IÄI, ÓÚIÈ~±,ÚÒñ, Á±,ÈÒIÓÓÙÈ
 ÓÚ ì±IÓÈ%ÄIÈñ, °ÍI ±ÙÁIñ POWER,
 ÓÓIÓÈÄIÈÈÈ PLAYER ÈIÈ CAMERA/PHOTO.

àÁIÄIÄIÈÄ ÛÓÙ±IÓ,ÓÍ ÄÈÈIÓ,

ìÒÙ±IÓ,ÍÈ %ñ Ó.ÓÈI ÄÈÈIÓ,,
 CAMERA/PHOTO È PLAYER
 COMMANDER <VTR4/OFF/ID/ID SET>
 • Ç·Ä ÈÚÄ VTR4 Ò È ÈÓÓÓI,ÁÓ,±IÈÈ
 Ó ÈI±,±ÄIÓ,,ÓÓÚI,Ú±%ÈÓÙ±IÈÓIìÓ,,Ó
 ÛÓ ±,ÍÄIÈñ %ñ,È%ÄÓI±IÄ °.
 • Ç·Ä ÈÚÄ OFF,ÁÒIÈ ÓÚI,Ú%ÈÓÙ±IÈÓÓIÓ,,Ó
 ÛÓ ±,ÄIÈñIÄÈÓÓÓI,ÁÚÁÚÓñ.
 • Ç·Ä ÈÚÄ ID Ò È ÈÓÓÓI,ÁÓ,±IÈÈ ÓÚI,Ú±
 %ÈÓÙ±IÈÓIìÓ,,ÓÚÓ ±,ÍÄIÈñ,
 ÛÓÙ±IÓ,ÍÄIìÓ,,Ó ì± IÓIÄ ID.
 • Ç·Ä ÈÚÄ ID SET Ò È ÛÓÙ±IÓ,ÍÄ IÓIÄ ± ID
 ì± ÓÚI,ÚÄ %ÈÓÙ±IÈÓIìÓ,,Ó ÛÓ ±,ÍÄIÈñ.

REC MODE <SP/LP>

- Ç·Ä ÈÚÄ SP Ò È Ä±ÓÈÈÈ, ÄÈÈIÄ SP
 (ÓÚI±%± ÛIÓ,,ÓÓÓÓ ÓÈÄ,Ä%ÄIÈñ).
- Ç·Ä ÈÚÄ LP Ò È Ä±ÓÈÈÈ, ÄÈÈIÄ LP
 (I%ÄIÄIìÓ,,Ó,,ÓÓÓ ÓÈÄ,Ä%ÄIÈñ).

BEEP <ON/OFF>

- Ç·Ä ÈÚÄ ON, ~ÚÓ.° ÁÚIÄ IÄ Ä ÒÈ,,ì±I°
 Ä,Ú±IÈ, ÍÓ,,%± Ç° ì±~ÈI±ÁÚÄ/
 ÓÓÙ±IÈ,±ÁÚÄÄ±ÓÈÈ,ÈÚ.%.
 • Ç·Ä ÈÚÄ OFF, ÓÓIÈ Ç° IÄ IÓÚÈÚÄ
 ÓI°~±Ú, ÁÚIÄ IÈ Ä,ÚIÓ,ÓÈ ÒÈ,,ì±I.

LCD COLOUR

Ç·Ä ÈÚÄ %±IìÛ ÛÓÙ±IÓ,ÍÛ È ÈÁIÄIÈÚÄ
 Û Ó,ÄI, ÈI%ÈI±ÚÓ ± ÓÚÁI ì±È±ÚÈñ + ÈIÈ -
 %ñ Ä,ÚIÈ Ó,ÍÈ ñ IÓÓÓÈÈ,ÄÚ±ÈÁÓ. ±ÈÄIÈñ.

Continued to the next page

è Ó%ÓIÈ±ÁÚÓñ ì±ÓIÄ%Ú, ~ÄÈ ÓÚ ì±È·Ä

Items for PLAYER mode only
AUDIO MIX*

Select this item and adjust the balance between the stereo 1 and stereo 2 by pressing \blacktriangledown or \blacktriangle .

DATA CODE <DATE/CAM or DATE>

- Select DATE/CAM to display date and recording data during playback.
- Select DATE to display date during playback.

* These settings are retained even when the battery is removed, as long as the vanadium-lithium battery is charged. As far as the items without an asterisk are concerned, their settings return to the default 5 minutes or more after the battery is removed.

When recording a close subject

When REC LAMP is set to ON, the red camera recording lamp on the front of the camcorder may reflect on the subject if it is close. In this case, we recommend you set REC LAMP to OFF.

Note

When playing back a tape recorded in the 16-bit mode, you cannot adjust the balance in AUDIO MIX.

i00i0, iE u0i, i0 %0fi AEEi+ PLAYER
AUDIO MIX*

C° A +EUÁ uU u0U+io, iE E A, UIE UEUÁ
·#i0 -Ai0, 0iAE%U0UÁ A0 1 E0U A02
00UÁi i+EUÉfi \blacktriangledown EIE \blacktriangle .

DATA CODE <DATE/CAM EIE DATE>

- C° A EUÁ DATE/CAM %0fi 000. +EÁiEfi
%0+U° E %0+ii' i Á+0E0E , 0 , Áifi
, 000 0EÁ, A%ÁiEfi.
- C° A EUÁ DATE %0fi 000. +EÁiEfi %0+U° , 0
, Áifi, 000 0EÁ, A%ÁiEfi.

* uUE u0U+io, iE 00U+U0fi%0+EA0 E0ifiUEE
·#U+ AEi0,, 0·i0i+ %0UÁi 00 , 00i+
Á+ fiEÁi+ , #i+ %EÁ, 0-iEUÉÁ, #fi ·#U+ AEi+.
000i+0+AU0fi u0U+io, 0i·ÁÁÁ, ÁÁ%0'IE, U0
0iE , 0Á, +~+ U0fi í E0i0%0i0iU 000U0fiE,
~Á ÁÁ 5 iEiU0 EIE -0iÁÁ 000iÁ 0ifiUEfi
·#U+ AEi0,, 0·i0i+.

e E Á+0E0E -iEÁi0 +000i0EÁi0,, 0
0· ÁiU+

á0,, %0+ U0ifiEfi REC LAMP u0U+io, iÁi+ i+
ON, í +0i+fi i+00~i+ Á+0E0E , E%Á0i+iÁ 0E
i+ 0Á A%ÁiE 0+ÁiE , E%Á0i+iÁ ° i0EÁU
0U +E+U, 0fi0U0· ÁiU+, Á0iE 0i +000i0EÁi
0~Ái ·iEÁi0. C ~U0i 0iU~+Á i°
Ái0iÁi%0UÁi u0U+io, Eú, REC LAMP i+ OFF.

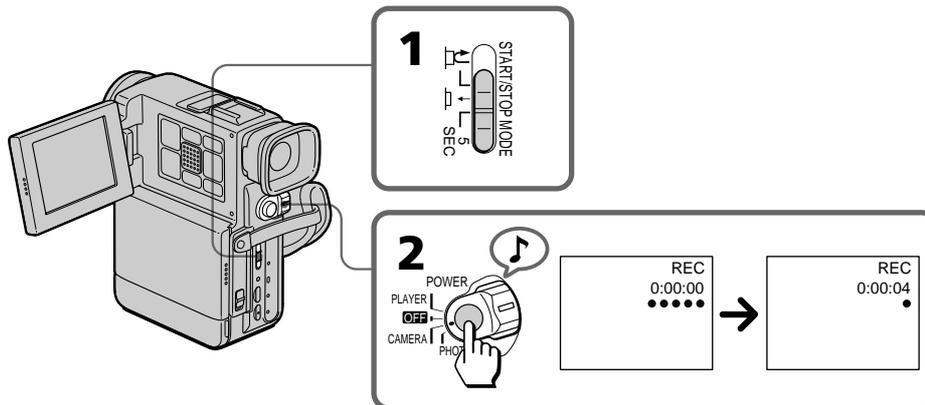
e E iA~+iEÁ
á0,, %0+, 000 0EÁ, 0%EU0fiÁiU+, Á+0E0+ii+fi,
16-·EU0, 0i AEÉiÁ, C° iÁ 0i0EÁUÁ
0U Á, UIE 0, +U, ·#i0 E AUDIO MIX.

Shooting scenery in several short takes

Long, continuous shots of scenery tend to be dull, and have to be edited to make an interesting video. With 5SEC. REC (5-second recording) mode, the camcorder records for only 5 seconds and then switches to Standby mode, so that you will automatically take a series of quick shots resulting in a lively video.

(1) Set START/STOP MODE to 5SEC. Five dots appear on the LCD screen or in the viewfinder.

(2) Press START/STOP. Recording starts. The dots disappear at a rate of one per second. When 5 seconds elapse and all the dots disappear, the camcorder switches to Standby mode automatically.



To extend the recording time

Press START/STOP again before all the dots disappear. Recording continues for 5 seconds from the moment you press START/STOP.

To cancel 5-second recording

Set START/STOP MODE to \mathbb{M} . If you set the switch while recording, recording continues.

Note on 5-second recording

You cannot use FADER function during 5-second recording.

5-Second Recording Mode

5-Second Recording Mode (5SEC. REC) allows you to record in 5-second intervals. This mode is useful for capturing quick shots of scenery, which can be edited together to create a lively video. To use this mode, set the START/STOP MODE dial to 5 SEC. When you press the START/STOP button, recording begins for 5 seconds. As the recording progresses, five dots on the LCD screen or in the viewfinder disappear one by one. When all five dots disappear, the camcorder automatically switches to Standby mode.

(1) Set START/STOP MODE to 5SEC. REC. Five dots appear on the LCD screen or in the viewfinder.

(2) Press START/STOP. Recording starts. The dots disappear at a rate of one per second. When 5 seconds elapse and all the dots disappear, the camcorder switches to Standby mode automatically.

To extend the recording time, press START/STOP again before all the dots disappear. Recording continues for 5 seconds from the moment you press START/STOP. To cancel 5-second recording, set the START/STOP MODE dial to \mathbb{M} while recording. Recording continues.

5-Second Recording Mode (5SEC. REC) allows you to record in 5-second intervals. This mode is useful for capturing quick shots of scenery, which can be edited together to create a lively video. To use this mode, set the START/STOP MODE dial to 5 SEC. When you press the START/STOP button, recording begins for 5 seconds. As the recording progresses, five dots on the LCD screen or in the viewfinder disappear one by one. When all five dots disappear, the camcorder automatically switches to Standby mode.

(1) Set START/STOP MODE to 5SEC. REC. Five dots appear on the LCD screen or in the viewfinder.

(2) Press START/STOP. Recording starts. The dots disappear at a rate of one per second. When 5 seconds elapse and all the dots disappear, the camcorder switches to Standby mode automatically.

Fade-in and fade-out

Ç, Â%oÂiËÂ Ë , °, Â%oÂiËÂ
ËÁÓ. †ÊÂiËfl

You can fade in or out to give your recording a professional appearance.

When fading in, the picture gradually fades in from black while the sound increases. When fading out, the picture gradually fades to black while the sound decreases.

When fading in [a]

- (1) While the camcorder is in Standby mode, press FADER. The fade indicator starts flashing.
- (2) Press START/STOP to start recording. The fade indicator stops flashing.

When fading out [b]

- (1) During recording, press FADER. The fade indicator starts flashing.
- (2) Press START/STOP to stop recording. The fade indicator stops flashing, and then recording stops.

Ç° iOËÁÚÂ Ôi†,iO , , °%oËÚ, Ë , °%oËÚ,
ËÁÓ. †ÊÂiËÁ. Ô Ë%o†,†flÇ† ÂËÁ†ÔËÔË
Ô ÔÚÂÔËÔi†,i'Ë , Ë%o.

è Ë , Â%oÂiËËËÁÓ. †ÊÂiËÁÔÔÔÚÂÔÂiO
„ Ô%oËÚÔfl ÔÚ~Â iO, Ô ËiË iOÁ†Ë~iO, Ô Ô
Ô%o iO, ÂiÂi~i ÔÔ, ~ÂiËÁi Á, Úi†. è Ë
„ Â%oÂiËËËÁÓ. †ÊÂiËÁÔÔÔÚÂÔÂiO
„ Ô%oËÚÔfl %oÔ~Â iO, Ô ËiË iOÁ†Ë~ÂiO, Ô Ô
Ô%o iO, ÂiÂi~i ÔÔiËËÁiËÁi Á, Úi†.

Ñi†fl „ Â%oÂiËfl ËÁÓ. †ÊÂiËfl [a]

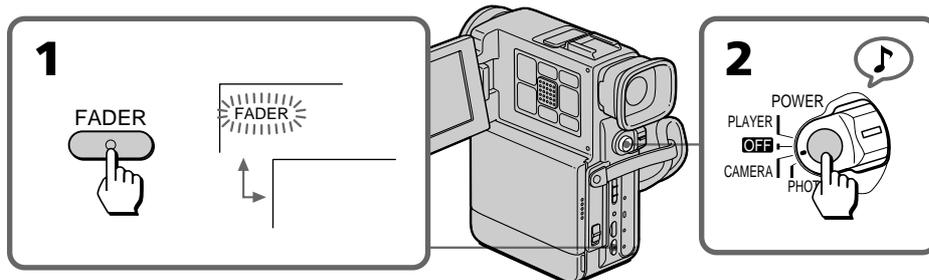
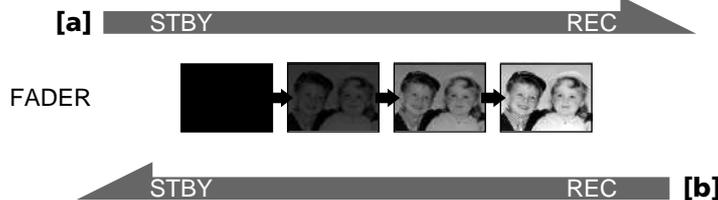
(1) äO, %o†, Ë%oÁÓi†iÁ †i†iO%oËÚÔfl, ÂËËiÁ
„ ÔÚÔ, iOÔÚË i†ËiËÚÁ FADER. ài%oËi†ÚÓ
„ Â%oÂiËfl i†Ëi†ÁÚ iË, †Ú.

(2) Ç†ËiËÚÁ START/STOP %o†fl i†~†i† Á†ÔËÔË.
ài%oËi†ÚÓ „ Â%oÂiËfl ÔÂ ÂÔÚ†ÁÚiË, †Ú.

Ñi†fl , °, Â%oÂiËfl ËÁÓ. †ÊÂiËfl [b]

(1) ÇÔ, Âi† Á†ÔËÔË i†ËiËÚÁ
FADER. ài%oËi†ÚÓ „ Â%oÂiËfl i†Ëi†ÁÚ
iË, †Ú.

(2) Ç†ËiËÚÁ START/STOP %o†fl ÔÔÚ†iO, †
Á†ÔËÔË. ài%oËi†ÚÓ „ Â%oÂiËfl ÔÂ ÂÔÚ†ÁÚ
iË, †Ú, Ë Á†ÔËÔË, ÔÔÚ†i†, iË, †ÁÚÔfl.



To cancel the fade-in/fade-out function

Before pressing START/STOP, press FADER until the fade indicator disappears.

When the START/STOP MODE control is set to \pm or 5SEC

You cannot use the fade-in/fade-out function.

Ñi†fl ÔÚiÂi° ÚÔi†~ËË „ Â%oÂiËfl/
„ Â%oÂiËfl ËÁÓ. †ÊÂiËfl

èÂ Â%o i†Ëi†ÚËÂi START/STOP i†ËiËiËÚÁ
FADER%ÔÚÁiÔÔ , ÔÔi†Ëi%oËi†ÚÓ „ Â%oÂiËfl
iÁËÔ~ÁÁiÁÚ.

äO, %o† Â, Úi†iÚÓ START/STOP MODE
ÚÔÚ†iO, iÁi , ÔÔiÔËÁiËÁ \pm ËiË 5SEC
Ç° iÁ ÔiÔËÁÚÁ ËÔÔÔi, ÁÓ, †Ú, ÚÔi†Ë,
„ Â%oÂiËfl, °, Â%oÂiËfl ËÁÓ. †ÊÂiËfl.

Photo recording

á†ÔËÒ, ÛÓÚÓ, †ÛËË

You can record a still picture like a photograph for about seven seconds. This mode is useful when you want to enjoy a picture such as a photograph or when you print a picture using a video printer (not supplied). You can record about 510 pictures on a 60-minute tape.

Shutter speed is automatically adjusted up to 1/1000 depending on the exposure.

(1) While pressing the small green button on the POWER switch, set it to PHOTO.

(2) Keep pressing START/STOP lightly until a still picture and "PHOTO CAPTURE" appear on the LCD screen or in the viewfinder.

Recording does not start yet. To change the still picture, release START/STOP, select still picture again, and keep pressing START/STOP lightly again.

If you press the PHOTO button on the Remote Commander when a still picture appears on the LCD screen or in the viewfinder, the camcorder will record that still picture.

However, you cannot select other still pictures by using this button.

(3) Press START/STOP deeper.

"PHOTO REC" flashes and the still picture on the LCD screen or in the viewfinder is recorded for about seven seconds. The sound during those seven seconds is also recorded and the pictures appear like an animation on the LCD screen or in the viewfinder. You cannot change the POWER switch or press START/STOP during recording.

Ç° ÎÔËÁÚÁ Á†ÔËÒ° †Û ÎÄÓÓ%,ËËÏÓÁ
ËÁÓ. †ËÁÏËÁ, Ì†Û ÓÓÚÓ,, †ÛËË. ÛÁ-ÁÏËÁ
ÏÄÓÏÏÏ, ÌËÏ ÓÁÏÛÏ%. ÛÓÓÓ ÁËËÏ Ì†ÛÁÛÓÏ
Ó-ÁÏ, ÓÓÏÁÁÏ, ÌÓ, % † Ç° ÌÓÛËÛÁ
Ì†ÓÏ†Ë% †Û, ÓÏ ËÁÓ. †ËÁÏËÁÏ ÓÓÏÓËËÏ Ì†
ÛÓÓÓ, †ÛËË. ËÏË ÌÓ, % † Ç° %ÁÏ†ÁÚÁ
†ÓÓÁ, †ÛÏÛËÁÓ. †ËÁÏËË,ËÓÓÓÏ, ÁÛÏ
Ë%ÁÓÓ ËÏÛÁ (ÏÁ Ó ËÏ†, †ÁÛÓÏ). Ç° ÎÔËÁÚÁ
Á†ÔËÒ†Û, Ó ËËËÁËËÛÁÏ, ÌÓ 510 ËÁÓ. †ËÁÏËË
Ì† 60-ÏËÏÛÏÛÏ. ÏÁÏÛÛ.

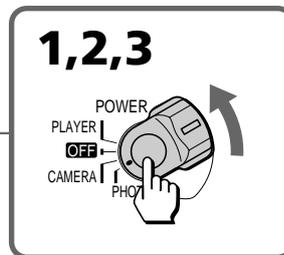
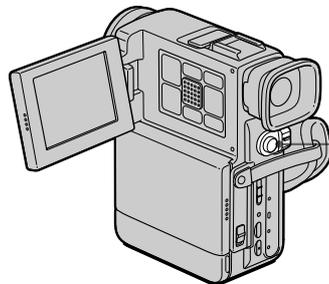
ËÏÓ ÓÓÛÁ†ÛÓ, †Á, ÛÏË ÛÁÛÓÏ
†, ÛÓÏ†ÛËË ÁÓÏË% Ó 1/1000, Á†, ËËËÏÏÓÓÛË ÓÛ
ÏÓÓÓÁËËË.

(1) Ç†ËËÏ†Ï Ì†ÏÁÏ, ÏÛ ÁÁÏÁÏÛ, ÌÏÓÓÏÛ Ì†
ÏÏ Ì†ÛÁÏÁ POWER ÛÓÛ†ÏÓ,ËÛÁ Á,, Ó,
ÓÓÏÓËÁËÁ PHOTO.

(2) È Ë%Á ËË, †ËËÁ ÓÏÁÏ, † Ì†Ë†ÛÓËË ÌÏÓÓÏÛ
START/STOP% ÓÛÁÏ ÓÓ, ÓÓÏ†
ÏÄÓÓ%,ËËÏÓÁ ËÁÓ. †ËÁÏËÁ Ë "PHOTO
CAPTURE" ÏÁ ÓÓÏ, Ì†ÛÓÏ, Ì† Ì†ÏÁ ÛÁÑ
ËÏË, Ë%ÓËÏ†ÛÁÏÁ. á†ÔËÒ, ÓÓÏ† Á-Á ÏÁ
Ì†-†Û.

ÑÏÏ ËÁÏÁÏÁÏËÏ ÏÄÓÓ%,ËËÏÓ,, Ó
ËÁÓ. †ËÁÏËÏÓÛÓÛÓÛËÛÁ START/STOP,
° Á ËÛÁ% Û, ÓÁÏÄÓÓ%,ËËÏÓÁ
ËÁÓ. †ËÁÏËÁËÓÏÓ, †Ó Ë%Á ËË, †ËËÁ
ÓÏÁ, Ì† Ì†Ë†ÛÓËË ÌÏÓÓÏÛ ËççËË Ì†
ÓÛÏ ÛÁ%ËÓÛ†ËËÏÏÓ, Ó ÛÓ †ÏÁÏËÏ, ÌÓ, % †
ÏÄÓÓ%,ËËÏÓÁ ËÁÓ. †ËÁÏËÁ ÓÓÏ, Ì†ÛÁÛÓÏ Ì†
Ì†ÏÁ ÛÁÑ ËÏË, Ë%ÓËÏ†ÛÁÏÁ,
Ë%ÁÓÏ†ÏÁ †. Û%ÁÛ Á†ÔËÒ° †Û, ÌÓ
ÏÄÓÓ%,ËËÏÓÁ ËÁÓ. †ËÁÏËÁ, Ë%ÓÏ†ÏÓ, Ç°
ÏÁ ÏÔËÁÚÁ, °. †Û, % Û, ÓÁ ÏÄÓÓ%,ËËÏÓÁ
ËÁÓ. †ËÁÏËÁ Ó ËÓÓÓÏ, ÁÓ, †ÁÏ Ï%†ÏÏË
ÏÏÓÓÏË.

(3) Ç†ËËÏÛÁ START/STOP, ÏÛËÁ.
"PHOTO REC" Û%ÁÛ ÏË, †Û. Ë
ÏÄÓÓ%,ËËÏÓÁ ËÁÓ. †ËÁÏËÁ Ì† Ì†ÏÁ
ÛÁÑ ËÏË, Ë%ÓËÏ†ÛÁÏÁ. Û%ÁÛ
Á†ÔËÒ° †Û, ÓÏ Ó ËËËÁËËÛÁÏ, ÛÁ-ÁÏËÁ
ÓÁÏË ÓÁÏÛÏ%. á, ÛÏ, Ó, ÁÏÏ Ì†ÛËÏ ÓÁÏË
ÓÁÏÛÏ% Û†ËÁ. Û%ÁÛ Á†ÔËÒ° †Û, ÓÏ.
áÛÏ ÛËÏÏÏ†ËËÏ ÓÓÏ, Ì†ÛÁÛÓÏ Ì† Ì†ÏÁ
ÛÁÑ ËÏË, Ë%ÓËÏ†ÛÁÏÁ, Ó, ÁÏÏ Á†ÔËÒË.
Ç° ÏÁ ÏÔËÁÚÁ ËÁÏÁÏËÛ. ÛÓÛ†ÏÓ, ÏÛ
ÏÏ Ì†ÛÁÏÏ POWER ËÏË Ì†Ë†Û, ÌÏÓÓÏÛ
START/STOP, Ó, ÁÏÏ Á†ÔËÒË.

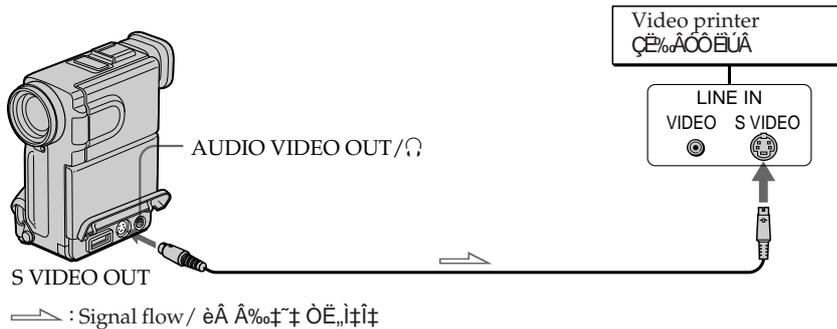


Note on the still picture

When the still picture recorded on this camcorder is played back on another VCR, the picture may be blurred. This is not malfunction.

Printing the still picture

You can print a still picture by using the video printer (not supplied). Connect the video printer using the supplied S video connecting cable. Refer to the instruction manual of the video printer as well.



If the video printer is not equipped with S VIDEO input

Use the supplied A/V connecting cable. Connect it to the AUDIO VIDEO OUT / Ⓜ jack and connect the yellow plug of the cable to the VIDEO input of the video printer.

è ÈÌÄ~±ìÈÄ í ÌÄÓÓ%,ÈÈìÓìÙ
 ÈÁÓ· ±ÈÄìÈ
 äÓ,%,±ÌÄÓÓ%,ÈÈìÓÄÈÁÓ· ±ÈÄìÈÄ,
 ÁaÖÈc±ììÓÄ ì± %±ììÓÈ ,È%ÄÓì±ÌÄ Á,
 ,ÒÒÒ ÓÈÄ,Ó%ÈÙÓñì±%Ù,ÓìÄÇä,
 ÈÁÓ· ±ÈÄìÈÄ ÌÓÈÁÙ .°Ù, ±ÄÌ°Ù°Ì. ùÚÓ ÌÄ
 ñ,ñÁÙÒñ ÌÄÈÓÓ ±,ìÓÓÙ,.

**è±ÒÒÄ~±Ùì± ÌÄÓÓ%,ÈÈìÓ,,Ó
 ÈÁÓ· ±ÈÄìÈñ**

Ç° ÌÓÈÁÙÄ ì±ÓÄ~±Ù±Ù, ÌÄÓÓ%,ÈÈìÓÄ
 ÈÁÓ· ±ÈÄìÈÄ Ò ÈÓÓÓì,ÁÓ,±ìÈÄì
 ,È%ÄÓÓ ÈìÙÄ ±(ÌÄÓ Èì±,±ÁÙÒñ).
 èÓ%ÒÓÄ%ÈÈÈÙÄ,È%ÄÓì±.Äì Ì,È%ÄÓÓ ÈìÙÄ Ù
 Ò ÈÓÓÓì,ÁÓ,±ìÈÄì Ò Èì±,±ÄÌÓ,,Ó
 ÓÓÄ%ÈÈÈÙÄì,ìÓ,Ó ì±.Äñ S-È%ÄÓ. èìÓÙ ÈÙÄ
 Ù±ìÈÄ ÙìÓ,Ó%ÒÙ,ÓÓÓ ÌÓÒìÙ±Ù±ÈÈ
 È%ÄÓÓ ÈìÙÄ±

ÒÒìÈ ,È%ÄÓÓ ÈìÙÄ ÌÄ ÓÒì±Äì ,ìÓ%Óì S-
 È%ÄÓ
 àÓÓÓì,ÁÙÈÙÄ Ò Èì±,±ÄÌ°È ÓÓÄ%ÈÈÈÙÄì,È
 ì±.Äì ±Ù%ÈÓ/È%ÄÓ èÓ%ÒÓÄ%ÈÈÈÙÄ
 Ò Èì±,±ÄÌ°È ÓÓÄ%ÈÈÈÙÄì,È ì±.Äì, ±Ù%ÈÓ/
 È%ÄÓ Ì,ÌÄÁ%Ù AUDIO VIDEO OUT/Ⓜ, Ç°ÙÓì
 ÓìÙ~±Ä ÓÓ%ÒÓÄ%ÈÈÈÙÄ ÈÄìÙ°È ±Ä Äìì
 ,ìÓ%ÙVIDEOì±,È%ÄÓÓ ÈìÙÄ Ä.

Advanced operations / ìÒÓÄ-ÄìÙÓ,Ó,ñì'Ä ÓÓÄ ±ÈÈ

Releasing the SteadyShot function

éÚÍÎ ~ÀÌËÂ ÛÛÌÍ~ËË STEADYSHOT

When you shoot, the  indicator appears on the LCD screen or in the viewfinder. This indicates that the SteadyShot function is working and the camcorder compensates for camera-shake.

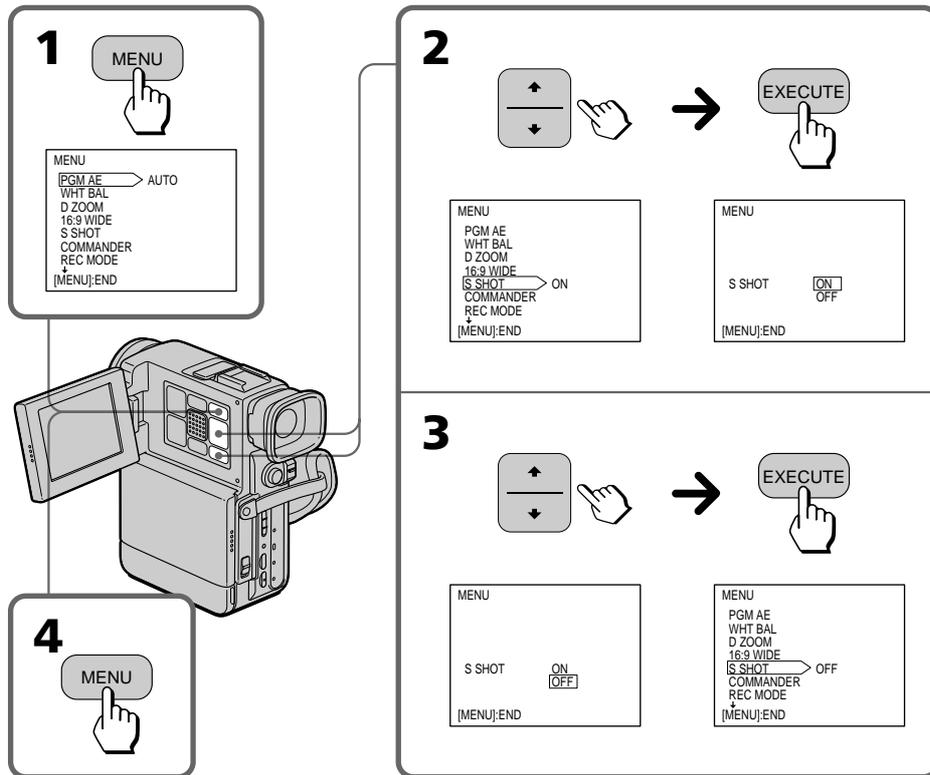
You can release the SteadyShot function when you do not need to use the SteadyShot function. Do not use the SteadyShot function when shooting a stationary object with a tripod.

- (1) Press MENU to display the menu on the LCD screen.
- (2) Press  or  to select S SHOT, then press EXECUTE.
- (3) Press  to select OFF, then press EXECUTE.
- (4) Press MENU to erase the menu display.

äö,%,° Ò ÖÉÁ,Ó%ÉÚÁ Ò ÁíÏÛ, Èì%Èí±ÚÓ 
 ÓÓñ,íñÁÚÓñ Ì± ¹ ±ÌÁ ÛáÑ. ùÚÓ ÛÌ±Á°, ±ÁÚ
 Ì± ÚÓ, ¹Ó ÛÛÌÍ~ËË ÛÓÚÓË~Ë, ÓË Ò ÁíËË
 ±·ÓÚ±ÁÚ %íñ ÌÓÌÓÀÌÓ±~ËË % ÖË±Ëñ
 ,È%ÁÓÍ±ÌÁ °.

Ç° ÌÓÉÁÚÁ ÓÚÍÎ~ËË ÛÛÌÍ~ËË ÛÓÚÓË~Ë, ÓË
 Ò ÁíËË, ÌÓ, %± Ç° ÌÁ ÌÛË%±ÁÚÁÓ,
 ÈÓÓÓÌ, ÁÓ, ±ËËË ÛÛÌÍ~ËË ÛÓÚÓË~Ë, ÓË Ò ÁíËË.
 ÇÁ ÈÓÓÓÌ, ÁÚËÚÁ ÛÛÌÍ~ËË ÛÓÚÓË~Ë, ÓË Ò ÁíËË
 Ò Ë Ò ÁíËË ÌÁÓÓ%, ÈËÌ° Ì Ó· ÁÌÚÓ, Ò
 ÓÓÌÓ°, Û ÁÌÓ, È.

- (1) Ç±ËËËÚÁ MENU %íñ ÓÚÓ· ±ËÁÌËñ ÌÁÌ,
 Ì± ¹ ±ÌÁ ÛáÑ.
- (2) Ç±ËËËÚÁ  ËËË  %íñ , ° Ò ± S SHOT, ±
 Á±ÚÁÌ Ì±ËËËÚÁ EXECUTE.
- (3) Ç±ËËËÚÁ  %íñ , ° Ò ± OFF, ± Á±ÚÁÌ
 Ì±ËËËÚÁ EXECUTE.
- (4) Ç±ËËËÚÁ MENU %íñ ÓÚËË ±ËËñ %ÈÓÓÌÁñ
 Í Á Ì.



Using the PROGRAM AE function

PROGRAM AE

You can select from three PROGRAM AE (Auto Exposure) modes to suit your shooting situation. When you use PROGRAM AE, you can get a capture high-speed action, record night views, etc.

PROGRAM AE (Auto Exposure) modes to suit your shooting situation. When you use PROGRAM AE, you can get a capture high-speed action, record night views, etc.

Selecting the best mode

Select a proper PROGRAM AE mode referring to the description on each PROGRAM AE mark in the viewfinder or the PROGRAM AE mode indication on the LCD screen or in the viewfinder.

PROGRAM AE

PROGRAM AE (Auto Exposure) modes to suit your shooting situation. When you use PROGRAM AE, you can get a capture high-speed action, record night views, etc.



SPORTS: Sports lesson mode

Capturing high-speed action in sports such as golf or tennis

SPORTS: Capturing high-speed action in sports such as golf or tennis

SUNSETMOON: Sunset & Moon mode

Recording sunset, night views, fireworks or neon signs

SUNSETMOON: Recording sunset, night views, fireworks or neon signs

LANDSCAPE: Landscape mode

Recording a landscape through a window or wire net

LANDSCAPE: Recording a landscape through a window or wire net

Notes on focus setting

- In the Sports lesson mode, you cannot take close-ups because the camcorder is set to focus only on subjects in the middle to far distance.
- In the Sunset & Moon and Landscape modes, the camcorder is set to focus only on distant subjects.

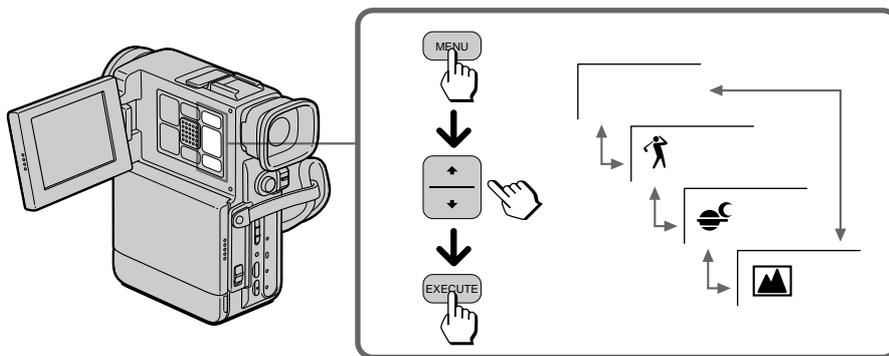
- In the Sports lesson mode, you cannot take close-ups because the camcorder is set to focus only on subjects in the middle to far distance.
- In the Sunset & Moon and Landscape modes, the camcorder is set to focus only on distant subjects.

Using the PROGRAM AE function

- (1) While the camcorder is in recording or Standby mode press MENU to display the menu on the LCD screen.
- (2) Press \blacktriangledown or \blacktriangle to select PGM AE, then press EXECUTE.
- (3) Press \blacktriangledown or \blacktriangle to select the desired mode, then press EXECUTE. If you want to change the other modes, repeat steps 2 and 3. The symbol of the selected mode appears on the LCD screen.
- (4) Press MENU to erase the menu display.

àÒÒÓÍ, ÁÓ, †ìÈÄ ÙÙìí`ÈÈ PROGRAM AE

- (1) äÓ, %†, È%ÄÓí†iÄ †ì†iÓ%ÈÜÒí, ÂÈÈiÄ Á†ÓÈÒÈ ÈiÈ, ÓÚÓ, iÓÓÙÈ †ÈÈiÈÜÄ MENU %íí ÓÚÓ. †ÈÄiÈíí iÄi, † †i †iÄ ÜäÑ.
- (2) †ÈÈiÈÜÄ \blacktriangledown ÈiÈ \blacktriangle %íí, °Ó † PGM AE, † Á†ÜÄi †ÈÈiÈÜÄ EXECUTE.
- (3) †ÈÈiÈÜÄ \blacktriangledown ÈiÈ \blacktriangle %íí, °Ó † ÈÄi†ÄiÓ, Ó ÂÈÈi†, † Á†ÜÄi †ÈÈiÈÜÄ EXECUTE. ÓÓiÈ Ç° iÓÓÙÈÄ ÈÄiÄiÈÜ, † %Ü, ÓÈ ÂÈÈi ÓÓ, ÜÓ ÈÜÄ ÓÙiÜ° 2È3. èÈi, Ói, °. †iüÓ, Ó ÂÈÈi† ÓÓí, ÈÜÒí † †i †iÄ ÜäÑ.
- (4) †ÈÈiÈÜÄ MENU %íí ÓÙÈ †iÈíí ÓÚÓ. †ÈÄiÈíí iÄi.



To return to automatic adjustment mode

Select AUTO in the PGM AE menu. The symbol of the PROGRAM AE mode disappears.

Ñííí, ÓÁ, †Ü† í ÂÈÈiÜ †, ÜÓi†ÜÈ`ÄÓiÓÈ Ä, ÙiÈ Ó, iÈ Ç° Ä ÈÜÄ AUTO, iÄi PGM AE. èÈi, Ói ÂÈÈi† PROGRAM AE ÈÓ`ÄÄiÄÜ.

Note on shutter speed
The shutter speed in Sports lesson mode is from 1/250 to 1/4000.

è ÈiÄ`†iÈÄ í ÓiÓ ÓÓÙÈ Á†Ü, Ó † èiÓ ÓÓÙ, Á†Ü, Ó † %íí ÂÈÈi† ÓÓÓ ÜÈ, j† Á†ííÜÈÈ`Ü%ÄÜÓÜ 1/250%Ó 1/4000.

Note on locking the exposure
If the exposure is locked when using the PROGRAM AE function, the exposure is automatically released when the PROGRAM AE mode is changed.

è ÈiÄ`†iÈÄ í ÜÈiÓÈ Ó, †iÈ. °iÓÓÁÈ`ÈÈ ÓÓiÈ °iÓÓÁÈ`Èí. Ü%ÄÜ Á†ÜÈiÓÈ Ó, ††È È ÈÓÓÓi, ÁÓ, †iÈÈ ÙÙìí`ÈÈ PROGRAM AE, °iÓÓÁÈ`Èí, ÓÁ, † †ÄÜÓí í †, ÜÓi†ÜÈ`ÄÓiÓiÜ ÂÈÈiÜ, iÓ, %† ÈÄiÄiíÄÜÓí ÂÈÈi PROGRAM AE.

- Notes on white balance setting**
- In the Sunset & Moon and Landscape modes, the white balance is automatically set to outdoor mode.
 - If the white balance is set to AUTO, it is automatically set when using the PROGRAM AE function.

- è ÈiÄ`†iÈÈ í ÜÓÜ†iÓ, iÄ . ††iÓ† . ÄiÓ, Ó
- Ç ÂÈÈi†, Á†iÓ%† ÓÓí† È ÙiÜ° È í†i%`†ÜiÓi . ††iÓ . ÄiÓ, Ó †, ÜÓi†ÜÈ`ÄÓiÈ ÜÓÜ†i†, iÈ, †ÄÜÓí † ÂÈÈi Ó`ÄiÈÈ † ÜiÈ`Ä.
 - ÓÓiÈ . ††iÓ . Äi, Ó, Ó ÜÓÜ†iÓ, iÄi † AUTO, Ói †, ÜÓi†ÜÈ`ÄÓiÈ ÜÓÜ†i†, iÈ, †ÄÜÓí Ó È ÈÓÓÓi, ÁÓ, †iÈÈ ÙÙìí`ÈÈ PROGRAM AE.

Focusing manually

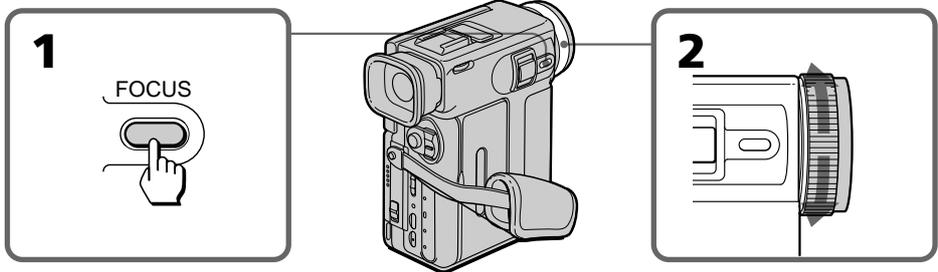
When focusing manually, first focus in telephoto before recording, and then reset the shot length.

- (1) Press FOCUS lightly. The  indicator appears on the LCD screen or in the viewfinder.
- (2) Turn the focus ring to focus on the subject.

εÛ~ι†η ÙÓÍÛÒÈ Ó,ί†

è È Ù~ι†η ÙÓÍÛÒÈ Ó,ί† ÒÒÁ ,†, °ÓÓηηÈÛÁ ÙÓÍÛÒÈ Ó,ιÛ, ÁÈÈíÁÛÁíÁÛÓÛÓÓÁ Á% Á†ÓÈÛ, †Á†ÛÁíÛÓÛ†ιÓ,ÈÛÁ †ÓÛÓηíÈÁ Ò· ÁííÈ.

- (1) εíÁ,,ί† ι†ÈíÈÛÁ FOCUS. àì%Èí†ÛÓ  ÓÓη,ÈÛÒη ι† Áí †íÁ ÛáÑ ÈíÈ , È%ÓÈÛ†ÛÁíÁ.
- (2) èÓ,Á íÈÛÁ ίÓí, ° ÙÓÍÛÒÈ Ó,íÈ %òη ÙÓÍÛÒÈ Ó,íÈ ι† Ó· ÁíÛ.



To focus in infinity
Press FOCUS deeply.  indicator appears on the LCD screen or in the viewfinder.

To return to the autofocus mode
Press FOCUS lightly to turn off  or  indicator.

Shooting in relatively dark places
Shoot at wide-angle after focusing in the telephoto position.

If  lights up
Subject is too close.

Ñη ÙÓÍÛÒÈ Ó,íÈ ι† ·ÁÓíÓíÁ~ιÓÛÛ, ††ÈíÈÛÁ ííÓÓíÛ FOCUS %Ó ίÓí†. àì%Èí†ÛÓ  ÓÓη,ÈÛÒη ι† †íÁ ÛáÑ ÈíÈ , È%ÓÈÛ†ÛÁíÁ.

Ñηη, ÓÁ, †·ÁíÈη ί ÁÈÈíÛ †,ÛÓí†ÛÈ·ÁÓíÓÈ ÙÓÍÛÒÈ Ó,íÈ ††ÈíÈÛÁ FOCUS %òη , °íí·ÁíÈη Èì%Èí†ÛÓ †  ÈíÈ .

è·Áíí†, ÓÛιÓÈÛÁí,ιÓ ÛÁíιÓí íÁÓÛÁ è ÓÈÁ,Ó%ÈÛÁ Ò· ÁíÛ, ÓÓíÓÈÁíÈÈ·È ÓíÓ,,Ó Û,,ι† ÓÓÓíÁ , °ÓÓíÁíÈη ÙÓÍÛÒÈ Ó,íÈ , ÓÓíÓÈÁíÈÈÛÁíÁÛÓÛ.

ÒÓíÈÁ†,Ó †ÁÛÒη  é· ÁíÛ ι†ιÓ%ÈÛÒη òîÈ·íÓí·íÈÁíÓ.

Adjusting the white balance

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White balance adjustment makes white subjects look white and allows more natural colour balance for camera recording. Normally white balance is automatically adjusted. You can obtain better results by adjusting the white balance manually when lighting conditions change quickly or when recording outdoors: e.g., neon signs, fireworks.

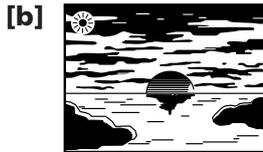
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Selecting the Appropriate Mode

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Select the appropriate white balance mode under the following conditions.

☀️, 🌅, 🎆, 🏠, 🏡, 🏢, 🏣, 🏤, 🏥, 🏦, 🏧, 🏨, 🏩, 🏪, 🏫, 🏬, 🏭, 🏮, 🏯, 🏰, 🏱, 🏲, 🏳, 🏴, 🏵, 🏶, 🏷, 🏸, 🏹, 🏺, 🏻, 🏼, 🏽, 🏾, 🏿



☀️ Indoor mode

- Lighting condition changes quickly. [a]
- Too bright place such as photography studios
- Under sodium lamps or mercury lamps

🌅 Outdoor mode

- Under a colour matching fluorescent lamp
- Recording a sunset/sunrise, just after sunset, just before sunrise [b], neon signs, or fireworks [c]

HOLD mode

Recording monochromatic subject or background

☀️ 🌅 🎆

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- [a]
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🌅 🎆 HOLD

- 🌅, 🎆, 🏠, 🏡, 🏢, 🏣, 🏤, 🏥, 🏦, 🏧, 🏨, 🏩, 🏪, 🏫, 🏬, 🏭, 🏮, 🏯, 🏰, 🏱, 🏲, 🏳, 🏴, 🏵, 🏶, 🏷, 🏸, 🏹, 🏺, 🏻, 🏼, 🏽, 🏾, 🏿
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☀️ 🌅 🎆 HOLD

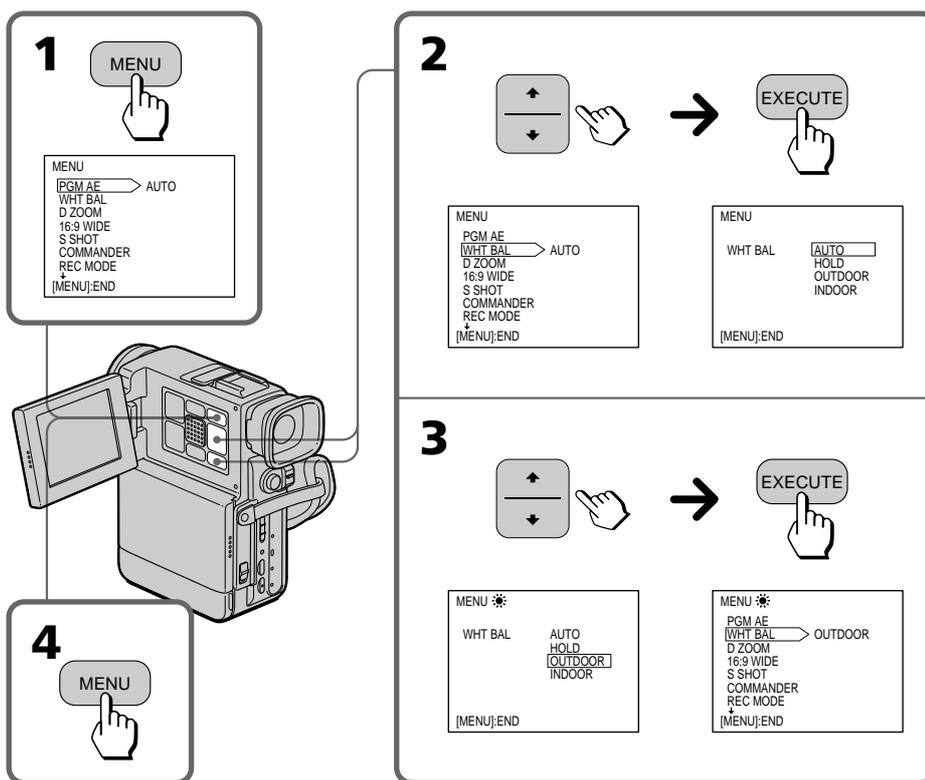
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Setting the White Balance

- (1) Press MENU to display the menu on the LCD screen during recording or Standby mode.
- (2) Press \blacktriangledown or \blacktriangle to select WHT BAL, then press EXECUTE.
- (3) Press \blacktriangledown or \blacktriangle to select the appropriate white balance mode, then press EXECUTE.
Each time you press the button, the indicator changes:
AUTO (no indicator) \rightarrow HOLD \rightarrow \star (outdoor) \rightarrow \odot (indoor)
- (4) Press MENU to erase the menu display.

i0U#i0, i# #i#i0# #Ai0,,0

- (1) \blacktriangle MENU %0ifn 0U0. \blacktriangle EÄiEfi iÄi, i# "i #iÄ ÜaÑ, 0, Äifn Ä#0E0E EIE, ÄEEiÄ, 0U0, i00UÈ.
- (2) \blacktriangle EÄiEÜÄ \blacktriangledown EIE \blacktriangle %0ifn , °0 # WHT BAL, # Ä#ÜÄi i#EiEÜÄ EXECUTE.
- (3) \blacktriangle EÄiEÜÄ \blacktriangledown EIE \blacktriangle %0ifn , °0 # 00%0i 0%0ifn "Ä,, 0 ÄEEi# #i#i0# #Ai0,, 0, # Ä#ÜÄi i#EiEÜÄ EXECUTE. ä#E%°E #Ä 0 È i#E#ÜEE i#00iÈ E#%Ei#Ü0 ÈÄiÄifnÄÜ0fi 0iÄ%0Ü, "Ei 0. #Ä0i:
AUTO (iÄÜ Èi%Ei#Ü0 #) \rightarrow HOLD \rightarrow \star (i# ÜiÈ"Ä) \rightarrow \odot (, 00iÄ"ÄiÈÈ)
- (4) \blacktriangle EÄiEÜÄ MENU %0ifn 0UÈ #iEfi 0U0. \blacktriangle EÄiEfi iÄi.



To return to automatic white balance mode

Select AUTO in step 3, then press EXECUTE.

Ñifn , 0Ä, #Ü# í ÄEEiÜ
#Ü0i#ÜE"Ä0i0È Ä,, ÜiÈ 0,iÈ #i#i0#
#Ai0,, 0
Ç" Ä EÜÄ Ü0U#i0,iÜ AUTO, 0ÜiÜÄ 3, #
Ä#ÜÄi i#EiEÜÄ EXECUTE.

Watching on a TV screen

Watching on a TV screen

You can use the camcorder as a VCR by connecting it to your TV for playback. There are some ways to connect the camcorder to your TV. When monitoring the playback picture by connecting the camcorder to your TV, we recommend you to use the mains for the power source.

If you connect directly to TV

Open the jack cover and connect the camcorder to the inputs on the TV by using the supplied A/V connecting cable. Set the TV/VCR selector on the TV to VCR. Procedure to play back is the same as when playing back on the LCD screen or in the viewfinder.

Turn down the volume of the camcorder.

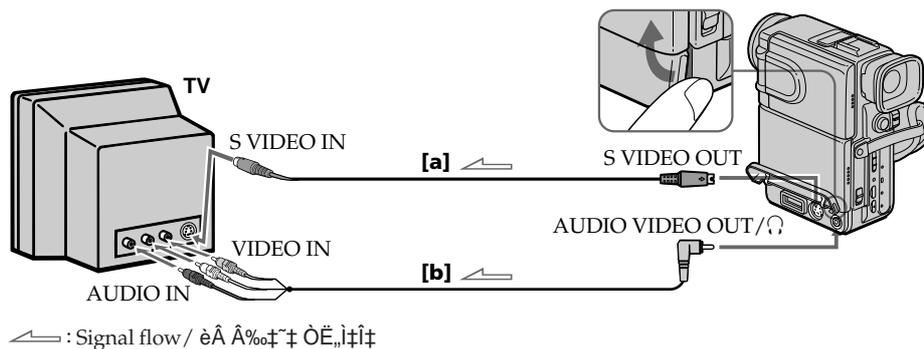
To get higher quality pictures in DV format, connect the camcorder to your TV using the S video connecting cable.

If you are going to connect the camcorder using the supplied S video connecting cable **[a]**, you do not need to connect the yellow (video) plug of the A/V connecting cable **[b]**.

è òòíóú ì± ´í ±ìÀ ÚÁÌÀ,ÉÁÓ ± Ç° ÌÓÉÁÚÁ ÈÒÓÓÌ,ÁÓ,±Ú, È%ÁÓì±ÌÀ Ù, Ì±ÁÓÚ,Á ãçà ÒÚÚÁÌ ÒÓ%ÒÓÁ%ÈÌÀÌÈñ ÁÁ Í Ç±ÁÌÚ ÚÁÌÀ,ÉÁÓ Ù%ñ,ÒÓÓ ÒÉÁ,Á%ÁÌÈñ. èÚ-ÁÓÚ,Ù,Ù ÒÓ Á%ÁÌÀÌ-Á ÌÁÚÓ%° %ñ ÒÓ%ÒÓÁ%ÈÌÀÌÈñ,È%ÁÓì±ÌÀ ° ÌÁÌÀ,ÉÁÓ Ù. è ÈÒ ÒÓÍÓÚ ÁÓÓ ÒÉÁ,Ó%ÈÌ,Ó ÉÁÓ. ±ÈÀÌÈÒÚÚÁÌÍÓ%ÒÓÁ%ÈÌÀÌÈñ,È%ÁÓì±ÌÀ ° Í Ç±ÁÌÚ ÚÁÌÀ,ÉÁÓ Ù Ì° ÁÍÓÌÀÌ%ÚÁÌ Ç±Ì ÈÒÓÓÌ,ÁÓ,±Ú, ´ÌÁÌÚ È-ÁÓÍÚ, ÒÁÚ, , Ì±ÁÓÚ,Á ÈÓÚÓ-ÌÈÌ± ÒÈÚ±Èñ.

ÒÒÌÈ Ç° ÒÓ%ÒÓÁ%ÈÌÀÌÈñ ÁÚÁ Ò ñÌÓ Í ÚÁÌÀ,ÉÁÓ Ù èÚÌ ÒÈÚÁÌ ° ÌÚ,,ÌÁÁ%ÚÈÈÒÓ%ÒÓÁ%ÈÌÈÚÁ,È%ÁÓì±ÌÀ Ù Í,ÌÓ%±Ì Ì± ÚÁÌÀ,ÉÁÓ Á Ò ÈÒÓÓÌ,ÁÓ,±ÈÁÌ Ò ÈÌ±,±ÁÌÓ,,Ò ÒÓÁ%ÈÌÈÚÁÌ,ÌÓ,ÓÌ±-ÁÌñ±Ú%ÈÓ,È%ÁÓ. ÌÓÚ±Ì,ÈÚÁ ÒÁÌÁÌÚÓ TV/VCR Ì± ÚÁÌÀ,ÉÁÓ Á,ÒÓÍÓÉÁÌÈÁ VCR. è Ó-Á%Ú ±,ÒÒÓ ÒÉÁ,Á%ÁÌÈñ Ù±ññÈÁ, Ì±ÌÈ Ò È,ÒÓÓ ÒÉÁ,Á%ÁÌÈÈ Ì± ´í ±ìÀ ÚÁÌÀ ÈÌÈ,È%ÁÓÈÓì±ÚÁÌÀ. è ÒÌÈÁ,ÚÁ,, ÒÌÍÓÚÚ, Ì±,È%ÁÓì±ÌÀ Á. ÑÌñ ÒÓÍÚ-ÁÌÈñ ÌÚ-Á,,ó Ì±-ÁÓÚ,± ÉÁÓ. ±ÈÀÌÈÈ,ÚÓ Ì±ÚÁDV,ÒÓ%ÒÓÁ%ÈÌÈÚÁ,È%ÁÓì±ÌÀ Ù Í ÚÁÌÀ,ÉÁÓ Ù Ò ÈÒÓÓÌ,ÁÓ,±ÈÁÌ Ì±-ÁÌñ S-,È%ÁÓ. ÒÒÌÈÇ° ÒÓ%ÒÓÁ%ÈÌÀÌÈñ ÁÚÁ,È%ÁÓì±ÌÀ Ù Ò ÈÒÓÓÌ,ÁÓ,±ÈÁÌ Ò ÈÌ±,±ÁÌÓ,,ó Ì±-ÁÌñ S-,È%ÁÓÈÈ,,Ì±ÌÓ, **[a]**. Ç±Ì ÌÁ ÌÚÈÌÓ ÒÓ%ÒÓÁ%ÈÌÀÌÈñ,ÈÁÌÚ-È (È%ÁÓ) ±Á-ÁÌ ÒÓÁ%ÈÌÈÚÁÌ,ÌÓ,ÓÌ±-ÁÌñ±Ú%ÈÓ,È%ÁÓ **[b]**.

Advanced operations / ÌÓÓ,Á-ÁÌÓÚ,Ó,ñÌÌÁ ÒÓÁ ±ÈÈ



Displaying recording data – data code function

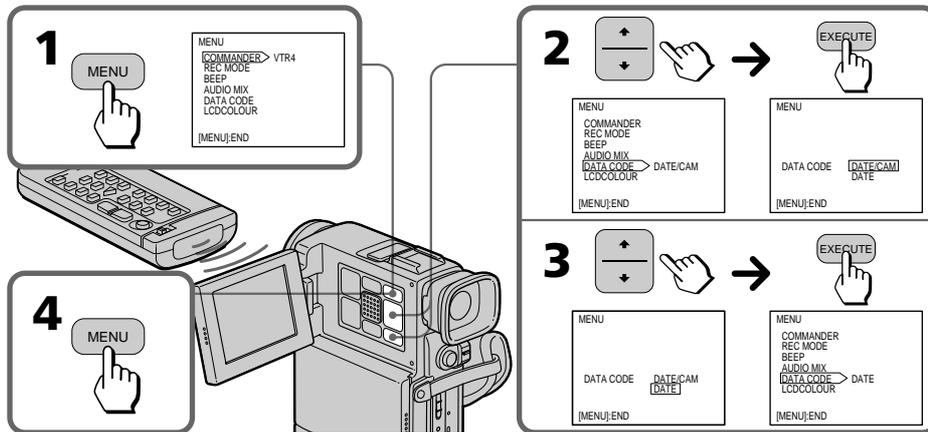
éÚÓ. †ÊÀÏËÂ %º†ÏÏ° Á†ÔËÒË – ÛÛÏÏ°ËÏ ÌÓ%º† %º†ÏÏ° Ì

You can display recording data (date/time or various settings when recorded) on the LCD screen or in the viewfinder during playback (Data Code). The Data Code is also displayed on the TV.

- (1) Press MENU to display the menu on the LCD screen.
- (2) Press \blacktriangledown or \blacktriangle to select DATA CODE, then press EXECUTE.
- (3) Press \blacktriangledown or \blacktriangle to select DATE/CAM or DATE, then press EXECUTE.
- (4) Press MENU to erase the menu display.

Ç° ÌÓËÁÛÁÓÚÓ. †ÁËÛ %º†ÏÏ°Á†ÔËÒË (%º†ÛÛ/ , ÁÏÏ ËÏË †ÁÏË°Ï°Á ÛÓÛ†ÏÓ,ÏË, ËÒÓÓÏ,ÁÓ,†ÏÏ°Á ÒË Á†ÔËÒË) Ì† Ï° ÌÁ ÛáÑ ËÏË , Ë%ºÓËÒÏ†ÚÁÏÁ , Ó , ÁÏÏ ,ÓÓÓ ÓËÁ,Á%ºÁÏËÏ (ÌÓ%º %º†ÏÏ°). äÓ%º %º†ÏÏ° Ì †ËËÁÓÚÓ. †Ë†ÁÛÓÏËÏ†ÚÁÏÁ,ËÁÓ Á.

- (1) Ç†ËÏËÛÁ MENU %ºÏÏ ÓÚÓ. †ÊÀÏËÏ ÌÁÏ, Ì† Ï° ÌÁ ÛáÑ.
- (2) Ç†ËÏËÛÁ \blacktriangledown ËÏË \blacktriangle %ºÏÏ , °Ó † DATA CODE, † Á†ÚÁÏ Ì†ËÏËÛÁ EXECUTE.
- (3) Ç†ËÏËÛÁ \blacktriangledown ËÏË \blacktriangle %ºÏÏ , °Ó † DATE/CAM ËÏË DATÖ, † Á†ÚÁÏ Ì†ËÏËÛÁ EXECUTE.
- (4) Ç†ËÏËÛÁ MENU %ºÏÏ ÓÚË †ËËÏ ÓÚÓ. †ÊÀÏËÏ ÌÁÏ.



To display recording data during playback

Press DATA CODE on the Remote Commander. Each time you press the button, the indicator changes as follows:

When DATE/CAM is selected in the menu system: date → various settings (AE LOCK, white balance, gain, shutter speed, aperture value) → no indicator.

When DATE is selected in the menu system: date → no indicator.

When bars (---:---) appear

- A blank portion of the tape is being played back.
- The tape was recorded by a camcorder without having date and time set.
- The tape is unreadable due to tape damage or noise.

ÑÏÏÏ , ÓÒÓ ÓËÁ,Á%ºÁÏËÏ %º†ÏÏ° Ì Á†ÔËÒË , Ó , ÁÏÏ , ÓÓÓ ÓËÁ,Á%ºÁÏËÏ

Ç†ËÏËÛÁ DATA CODE Ì† ÓÛÏ ÛÁ %ºËÓÛ†ËËÓÏÏ,Ó ÛÓ †,ÏÁÏËÏ. ä†Ë%ºË †Á ÌÓ, %º † Ç° Ì†ËËÏ†ÁÛÁ ÌÏÓÓÏÛ, ËÏ%ºËÏ†ÚÓ ËÁÏÁÏÁÛÓÏÏ ÒÏÁ%ºÛ. ËÏ° ð. †ÁÓÏ:

ÒÒÏË ÛÓÛ†ÏÓ, Ì† DATE/CAM , ° †Ë† , ÓËÓÛÁÏÁ ÌÁÏ :

%º†Û† → †ÁÏË°Ï°Á ÛÓÛ†ÏÓ,ÏË (AE LOCK, †Ë†Ï°-ÁÏÓ,Ó, ÛÓËÏÁÏËÁ, ÒÏÓ ÓÓÛ. Á†Û,Ó †, †ÓÁ ÛÛ ÌÓÁÁÏ†-ÁÏËÁ) → ÌÁÛËÏ%ºËÏ†ÚÓ †. ÓÒÏË ÛÓÛ†ÏÓ, Ì† DATE , ° †Ë† , ÓËÓÛÁÏÁ Ì Á Ì :

%º†Û† → ÌÁÛËÏ%ºËÏ†ÚÓ †.

ÒÒÏË ÓÓÏÏ,ÏÏÁÛÓÏÏ ÏÏ†Ë† (---:---)

• ÇÓÓÓ ÓËÁ,Ó%ºËÛÓÏÏÁÁ†ÔËÒÏÏÏ†Ï†ÓÛÛ, ÌÁÏÛ°.

• äÁÏÛ† : Ì† Á†ÔËÒÏ†Ë† Ì† Ë%ºÁÓÏ†ÏÁ Á ·ÁÁ ÛÓÛ†ÏÓ,ÏË %º†Û° Ë , ÁÏÁÏË.

• äÁÏÛ† ÌÁ ÌÓËÁÛ .°Û , ÓÓÓ ÓËÁ,Á%ºÁÏÏ ËÁ-Á† ÓÓ, ÁË%ºÁÏËÏ ÌÁÏÛ° ËÏË ÓÓÏÁÏ.

Returning to a pre-registered position

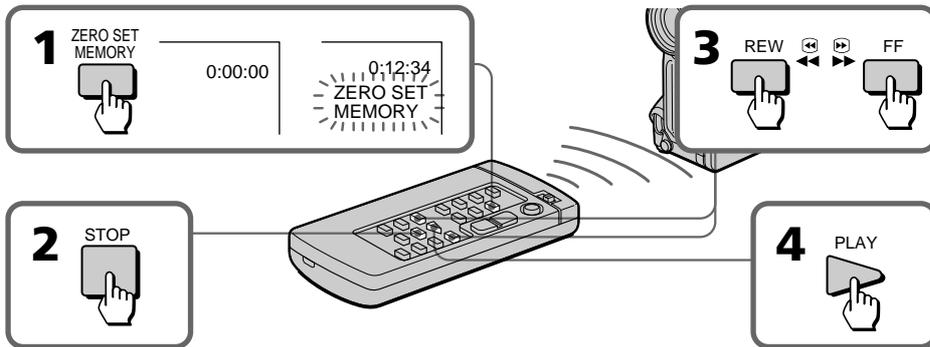
ÇÓÁ, ±ÚÍÔ Â%, ± È- ÚÀÌ ΙΟΑ± Â, ΕΟΥ È Ο- ±ΙΙΟÈ ΟΟÁÈ^ÈÈ

Using the Remote Commander, you can easily go back to the desired point on a tape after playback.

- (1) During playback, press ZERO SET MEMORY at the point you later want to locate. The counter shows "0:00:00" and "ZERO SET MEMORY" appears on the LCD screen or in the viewfinder.
- (2) Press ■ when you want to stop playback.
- (3) Press ◀◀ to rewind or press ▶▶ to fast-forward the tape to the counter's zero point. The tape stops automatically when the counter reaches approximately zero. "ZERO SET MEMORY" disappears and the time code appears.
- (4) Press ▷.

àÒÒÍ, ÁÚñ ÒÙí, Ú%ÈÓÚ±í·ÈÒìÍ, Ó ÚÒ ±, ÌÀìÈñ Ç° ÌÓÈÁÚÁ ÌÁ,, ÍÓ ,Á ÌÚÚ, Òñ Ì ÈÁÌ±ÁìÓÈ ÚÓ-ÌÁ ÌÁìÚ° ÒÓÒÌÁ, ÓÓÒ ÓÈÁ, Â%ÂìÈñ.

- (1) ÇÓ, Áññ, ÓÓÒ ÓÈÁ, Â%ÂìÈñ Ì±ÈÌÈÚÁ ZERO SET MEMORY, ÚÓ-ÌÁ, ÍÓÚÓ Û, ÓÓÚÓÍ Ç° ÌÓÚÈÚÁ Ò-Ì± ÚÈÈÚ, È-ÁÚ-Èí-Ú%ÁÚ ÒÓÍ±Á°, ±Ú, "0:00:00", È "ZERO SET MEMORY" ÒÓñ, ÌñÁÚÓñ Ì± "Í ±ÌÁ ÛáÑ ÈÌÈ , È%·ÓÈÓÌ±ÚÁÌÁ.
- (2) Ç±ÈÌÈÚÁ ■. ÍÓ,,%± Ç° Á±ÌÓÚÈÚÁ ÓÓÚ±ÍÓ, ÈÚ, ÓÓÒ ÓÈÁ, Â%ÂìÈÁ.
- (3) Ç±ÈÌÈÚÁ ◀◀ %ññ ÛÓÍÓ ÀììÓÈ ÒÁ ÁìÓÚÍÈ ÌÁìÚ° Ì±Á±% ÈÌÈ ▶▶ %ññ ÛÓÍÓ ÀììÓÈ ÒÁ ÁìÓÚÍÈ ÌÁìÚ°, ÒÁ Â%·ÓÓ ÌÚÌÁ, ÓÈ ÚÓ-ÌÈ Ò-ÁÚ-Èí±. áÁìÚ± ÓÓÚ±ÍÓ, ÈÚÓñ ±, ÚÓÍ±ÚÈ-ÁÓÍÈ, ÍÓ,,%± Ò-ÁÚ-Èí%ÓÈ%ÁÚ Ò È-ÌÈÁÈÚÁ Ì, ÍÓ %·Ó 0. "ZERO SET MEMORY" ÈÒ-ÁÁìÁÚ È ÒÓñ, ÈÚÓñ, ÁÌÁììÓÈ ÌÓ%.
- (4) Ç±ÈÌÈÚÁ ▷.



Note on the tape counter

There may be a discrepancy of several seconds from the time code.

Notes on ZERO SET MEMORY

- When you press ZERO SET MEMORY, the counter's zero point is memorized. Press ZERO SET MEMORY again before step 3 to cancel the memory .
- Zero set memory may not function when there is a blank portion between pictures on a tape.
- Zero set memory functions in recording standby mode.

è ÈÌÁ-±ÌÈÁ Ì Ò-ÁÚ-ÈÍÚ ÌÁìÚ° áÓÈÁÚ ·Ú, ±ÓÍÓÈ%ÂìÈÁ Ì± ÌÁÒÍÓÍ, ÍÓ ÒÁìÚì% Ò Û±ÍÚÈ-ÁÓÍÈÌ , ÁÌÁìÁÌ.

è ÈÌÁ-±ÌÈñ Ì ZERO SET MEMORY

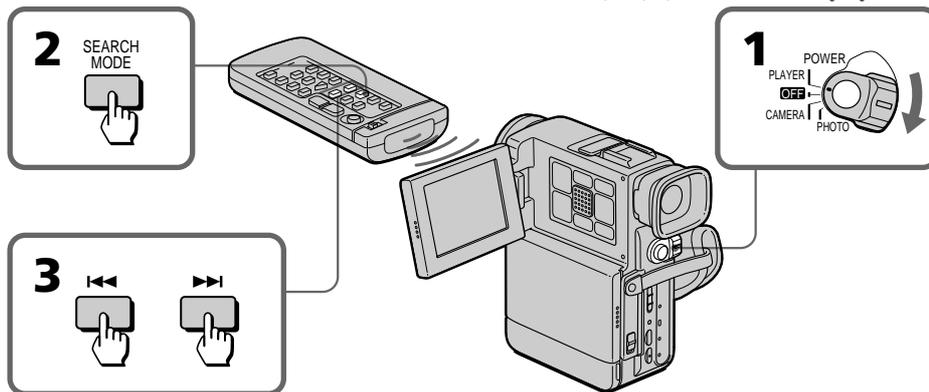
- äÓ,,%± Ç° Ì±ÈÈÌ±ÁÚÈ ZERO SET MEMORY, Á±ÓÓÍÈÌ±ÁÚÓñ ÌÚÌÁ, ±ñ ÚÓ-Ì± Ò-ÁÚ-Èí±. èìÓ, ± Ì±ÈÌÈÚÁ ZERO SET MEMORY %·Ó , ÒÓììÁìÈñ ÒÚìÚ± 3 %ññ ÒÚÌÁì° Ò±ñÚÈ.
- á±ÓÓÍÈÌ±ÈÁ ÌÚÌÁ, ÓÈ ÛÓÚ±ÍÓ, ÌÈ ÌÁ ±-ÓÚ±ÁÚ, ÍÓ,,%± ÌÁÈ%Ú ÈÁÓ· ±ÈÁìÈñÌÈ Ì± ÌÁìÚÁ ÈÌÁ, ÚÓñ ÌÁÁ±ÓÈÒ±ì·Á ±ÓÚÈ.
- ÌÚì-Èñ Á±ÓÓÍÈÌ±Èñ ÌÚñ ±-ÓÚ±ÁÚ , , ÁÈÈÌÁ, ÓÚÓ, ÌÓÓÚÈÁ±ÓÈÓÈ.

Locating the beginning of each scene

é·ì† ÛÊÂÌËÂ ì†~†ì†
ì†Ê%ÓË Ò^Âì°

You can search for the beginning of the recorded picture with the date using the Remote Commander. You can also search for the photo-recorded pictures only in the backward and forward direction from the preset position.

- (1) Make sure that the POWER switch is set to PLAYER.
- (2) Press SEARCH MODE on the Remote Commander to select date search (search with the date) or photo search (search the photo-recorded pictures only).
- (3) Press ►► for upward or ◄◄ for downward on the Remote Commander to select the desired picture. Each time you press ►► or ◄◄, the camcorder searches for the next scene.



To stop searching

Press ■ STOP.

When you use a recorded tape which has blank portions between pictures

The camcorder may not search for the recorded picture or data may not be stored.

Note on cassette memory

The cassette memory function cannot be used with this camcorder.

Notes on searching

- The camcorder may not search if the beginning of the search portion is too close to the tape head position.
- When you use date search, the camcorder plays back the search picture, and when you use photo search, the camcorder enters playback pause at the point.

ç° ÌËÂÛÂ ì†ÊÛË ì†~†ì† Á†ÔËÒ~ììÓ,Ó
ËÁÓ· †ÊÂÌËñÒÓ Â%ÂÌììËË%†Û° Ó
ËÓÓÓì,ÁÓ,†ìÊÂì ÒÚì,Ú†%ËÓÚ†ìÊÓììÓ,Ó
ÚÓ †ìÊÌËñ, ç° ÌËÂÛÂ Û†ìËÁ ËÓì†Û,
ÚÓì,ìÓ ÚÓÓËËÁÓ· †ÊÂÌËñ, ì†Ó †ìÊÌËË
ì†Á†%ËËË,ÒÂ Â%ÓÓÚÚÂìÚ,Á,ÒÓÓìËËËñ.
(1)·Â%ËÛÁÓ, ~ÚÓ ~ìì ~†ÚÂì, POWER
ÚÓÓ~ìì,ììì, ÓÓìËËËËÁ PLAYER.

(2)ç†ÊËËÛÂ SEARCH MODE ì† ÒÚì ÚÂ
%ËÓÚ†ìÊÓììÓ,Ó ÚÓ †ìÊÌËñ %ñìì, °·Ó †
ÁËËì†ÓËËËì†%†Û° (ÓËËËËÓÓ Â%ÂÌììËË
%†Û°) ËËË ÚÓÓÚ, †ÚËË (ÓËËËËÓÓ,ìÓ
ÚÓÓËËËÁÓ· †ÊÂÌËË).

(3)ç†ÊËËÛÂ ►►ì %ñìì ì†Ó †ìÊÌËñ,ÒÂ Â%
ËËË ◄◄ %ñìì ì†Ó †ìÊÌËñ ì†Á†% ì† ÒÚì,ÚÂ
%ËÓÚ†ìÊÓììÓ,Ó ÚÓ †ìÊÌËñ %ñìì, °·Ó †
ËÁì†ÂìÓ,Ó ËÁÓ· †ÊÂÌËñ.
á†Ê%Ë Ë †Á Ò Ë ì†Ê†ÚËËË ►►ìÊËË ◄◄
,Ë%ÁÓì†ìÁ † ì†ìÓ%ËÛ ÓìÂ%Ú,Ú, Ó^ÂìÚ.

Ñìñ ÒÓÓ~ììÓ,† ÓÓËËì†
ç†ÊËËÛÂ ■ STOP.

äó, %ç° ËÓÓÓì ÁÚÂÚÂ Á†ÔËÒ~ììÚ ÌÂìÚÚ,
ìÓÓÓ ìñ ËËÁÚÚ ËËÓÚ^Â ÌÁÓÚ† ÌÁË%ÓÓ
ËÁÓ· †ÊÂÌËñìË
çÊ%ÁÓì†ìÁ †ìËËÁÚ ÌÂìÊÛË Á†ÔËÒ~ììÓÁ
ËÁÓ· †ÊÂÌËËÁ Ë %†Û† ÌËËÁÚ ÌÂ^Ú,
Á†ÓÓììÁì†.

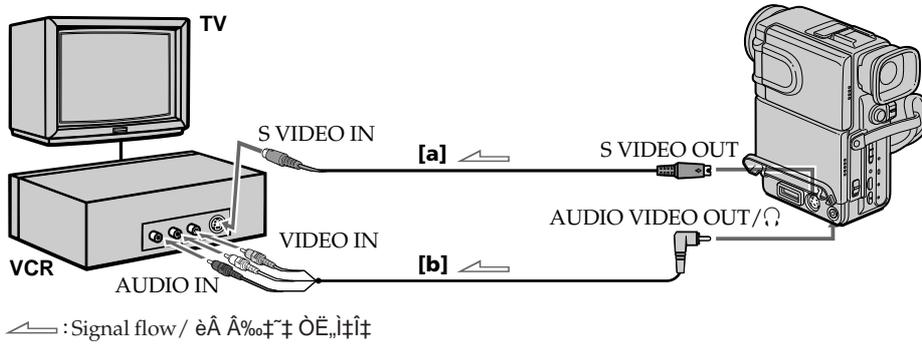
è ÊËÁ~†ìËÁ Ì Á†ÓÓìËì†ìËËË Ì†ÒÒÂÚ°
ìÚììËñ Á†ÓÓìËì†ìËñ ì†ÓÓÁÚ° ÌÂ ÌËËÁÚ
·Ú, ËÓÓÓì,ÁÓ,†ì† ì† %~ììËËË ,Ë%ÁÓì†ìÁ Â.

è ÊËÁ~†ìËñ Ì ÓÓËËËËË
• çÊ%ÁÓì†ìÁ †ìËËÁÚ ÌÂ, °ÓììËËË, ÓÓËËËË,
ÁÓìË ì†~†ìÓ ÒìË^ìÓì, ÌËÁìÓ Ì ÚÂìÚ^ÂìÚ
ÓÓìËËËË ÌÂìÚ, ì† ÒìÓ^ìÁ.
• äó, %ç° ç°, °ÓììñÁÚÂ ÓÓËËËË %†Û°
,Ë%ÁÓì†ìÁ †ÓÓÓ ËËÁ,Ó%ËÛìÊ%ÁììËËÁ
ËÁÓ· †ÊÂÌËËÁ, † ÌÓ, %ç° ç°, °ÓììñÁÚÂ
ÓÓËËËËËËË, †ÚËËË, Ë%ÁÓì†ìÁ †,ìÓ%ËÛ,
ÁËËËË Ò†ÚÂ°, ÓÓÓ ËËÁ,Â%ÁìËËñ, ì†Ê%ÁììËËË
ÚÓ^ìÁ.

Using the S video connecting cable [a] or A/V connecting cable [b]

Set the input selector on the VCR to LINE.

àÒÓÍ,ÁÓ,±ìÈÀ ÓÓÂ%ÈìÈÚÁì,ìÓ,,Ó
 ì±·Áìfl S-,È%ÁÓ [a] ÈÌÈ
 ÓÓÂ%ÈìÈÚÁì,ìÓ,,Ó ì±·Áìfl ±Ù%ÈÓ/,È%ÁÓ
 [b]
 ìÒÚ±ìÓ,ÈÚÁ ÒÁìÁìÚÓ ,ìÓ%ì¹ ÒÈ,,ì±ìÓ, ì±
 àÇà , ÓÓÍÓÈÁìÈÁ LINE.



Advanced operations / ìÒÓ,Á-ÁìÒÚ,Ó,±ì¹ Á ÓÓÁ ±ÈÈ

Editing onto another tape

Editing onto another tape

Starting editing

- (1) Insert a blank tape (or a tape you want to record over) into the VCR, and insert your recorded tape into the camcorder.
- (2) Play back the recorded tape on the camcorder until you locate the point where you want to start editing, then press **II** to set the camcorder in playback pause mode.
- (3) On the VCR, locate the recording start point and set the VCR in recording pause mode.
- (4) Press **II** on the camcorder and VCR simultaneously to start editing.

To edit more scenes

Repeat steps 2 to 4.

To stop editing

Press **■** on both the camcorder and the VCR.

Notes on editing when using the DV connecting cable

- You can connect one VCR only.
- If you record playback pause picture via the DV jack, the recorded picture becomes rough.

Notes on editing when using the A/V connecting cable

- Press DATA CODE button to turn off the display indicators. Otherwise, the indicators will be recorded on the tape.
- If your TV or VCR is a monaural type, connect the yellow plug of the A/V connecting cable for video to the TV or VCR. Connect only the white or red plug for audio to the TV or VCR. If you connect the white plug, the sound is L (left) signal. If you connect the red plug, the sound is R (right) signal.
- You can edit precisely by connecting VMC-LM7 adaptor (not supplied) and a LANC cable to this camcorder and other video equipment having fine synchro-editing function, using this camcorder as a player.

Editing onto another tape

- (1) ÇÒÚ±, ÚÁ ÒÈÓÚÚ, ÎÁÌÚÚ (ÈÏÈ ÎÁÌÚÚ, ÍÓÚÓ Ú, Ç° ÍÓÚÈÚÁ ÓÁ ÁÁ±ÔÈÓ±Ú), äÇá È, ÓÚ±, ÚÁ Ç±Ú Á±ÔÈÓ±ÚÚ, ÎÁÌÚÚ, È%ÁÓÍ±Á Ú.
- (2) ÇÓÓÓ ÓÈÁ, Ó%ÈÚÁÁ±ÔÈÓ±ÚÚ ÎÁÌÚÚ, È%ÁÓÍ±Á Á%Ó ÚÁ, ÓÓ, ÓÓ± Ç° ÎÁ Ó·± ÚÈÈÚÁ ÚÓ·ÍÚ, ÓÚÍÚ%±Ç° ÍÓÚÈÚÁ Ì±±Ú, ÍÓÌÚ±È, ± Á±ÚÁÌ Ì±ÈÏÈÚÁ ■ %Ífl ÚÓÚ±ÍÓ, ÌÈ, È%ÁÓÍ±Á ° Ì± ÁÈÈÏ Ó±ÚÁ° , ÓÓÓ ÓÈÁ, Á%ÁÏÈfl.
- (3) Ç±È%ÈÚÁ Ì± äÇá ÚÓ·ÍÚ ÚÓ·ÍÚ Ì±±Í± Á±ÔÈÓÈ È ÚÓÚ±ÍÓ, ÈÚÁ äÇá Ì± ÁÈÈÏ Ó±ÚÁ° Á±ÔÈÈ.
- (4) È%ÍÓ, ÁÏÁÌÍÓ Ì±ÈÏÈÚÁ ■ Ì±, È%ÁÓÍ±Á Á È Ì± äÇá %Ífl Ì±±Í± ÍÓÌÚ±È±.

ÑÍfl ÍÓÌÚ±È± % Ú,, È, Ò·Áì èÓ, ÚÓ ÈÚÁ ÓÚÍÚ° ÓÓ2ÓÓ4.

ÑÍfl ÓÓÚ±ÍÓ, ± ÍÓÌÚ±È± Ç±ÈÏÈÚÁ ■ È Ì±, È%ÁÓÍ±Á Á È Ì± äÇá.

è ÈÏÁ±Èfl í ÍÓÌÚ±ÈÚ Ò È ÈÒÓÓÍ, ÎÁÓ, ±ÈÈ ÓÓÁ%ÈÏÈÚÁ, ÍÓ, Ó ^ÈÚ Ó, Ó, Ó, È%ÁÓÍ±Á·ÁÍfl

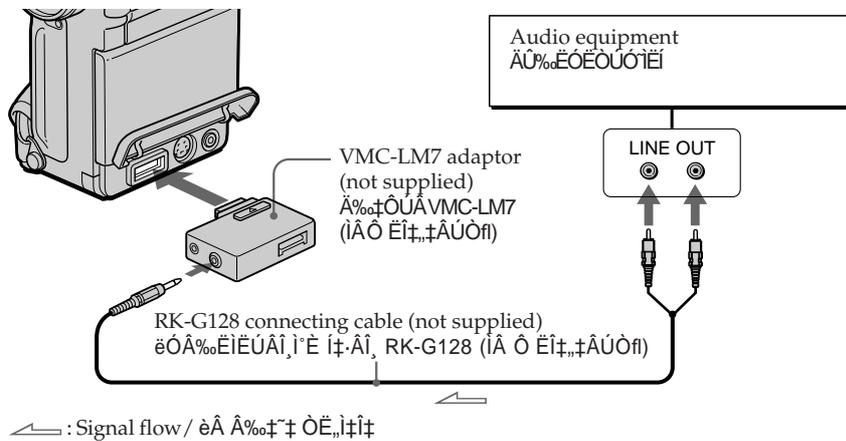
- Ç° ÍÓÈÁÚÁ ÓÓ%ÓÓÁ%ÈÏÈÚ, ÚÓÍ, ÍÓÓ%ÈÏ äÇá.
- ÓÓÍÈ Ç° Á±ÔÈÓ° ±ÁÚÁ ÈÁÓ· ±ÈÁÏÈÁ, ÍÓÍÁÌÚ Ó±ÚÁ°, ÓÓÓ ÓÈÁ, Á%ÁÏÈfl~Á ÁÁ , ÎÁÁ%ÓDV, Á±ÔÈÓ±ÍÍÓÁÈÁÓ· ±ÈÁÏÈÁ·Ú%ÁÚ ÎÁ·ÁÚÍÈÏ.

è ÈÏÁ±ÈÁ í ÍÓÌÚ±ÈÚ Ò È ÈÒÓÓÍ, ÁÓ, ±ÈÈ ÓÓÁ%ÈÏÈÚÁ, ÍÓ, Ó Ì±·ÁÍfl ±Ú%ÈÓ, È%ÁÓ

- Ç±ÈÏÈÚÁ ÌÍÓÓÍ± DATA CODE %Ífl °Íl ~ÁÏÈfl ÈÏ%ÈÏ±ÚÓ Ó, %ÈÓÓÍÁfl. Ç Ó ÓÚÈ, ÍÓÍÓÍÚ±ÁÈÏ%ÈÏ±ÚÓ °·Ú%ÚÚ Á±ÔÈÓ±Í± Ì± ÎÁÌÚÚ.
- èÓ%ÓÓÁ%ÈÏÈÚÁÈÁÍÚ° È ±Á·Áì ÓÓÁ%ÈÏÈÚÁ, ÍÓ, Ó Ì±·ÁÍfl ±Ú%ÈÓ, È%ÁÓ%Ífl, È%ÁÓÓÈ, Ì±ÍÓ, Í ÚÁÏÁ, ÈÁÓ Ú ÈÏÈ äÇá. èÓ%ÓÓÁ%ÈÏÈÚÁ ÚÓÍ, ÍÓ·Áì° ÈÏÈ Ì±Óì°È ±Á·Áì %Ífl ±Ú%ÈÓÈ, Ì±ÍÓ, Í ÚÁÏÁ, ÈÁÓ Ú ÈÏÈ äÇá. ÓÓÍÈ Ç° ÓÓ%ÓÓÁ%ÈÏÈÚÁ·Áì°È ±Á·Áì, ÚÓÁ, ÚÍ·Ú%ÁÚ ÓÁ Á%±, ±Ú ÓflL (ÎÁ, °Í) ÒÈ, ±±ÍÓÍ. ÓÓÍÈ Ç° ÓÓ%ÓÓÁ%ÈÏÈÚÁ Í±Óì°È ±Á·Áì, ÚÓÁ, ÚÍ·Ú%ÁÚ ÓÁ Á%±, ±Ú Ófl R (Ò ±, °Í) ÓÈ, Ì±ÍÓÍ.
- Ç° ÍÓÈÁÚÁ°, ÓÓÍÈÚ, ÚÓ·ÍÈ ÍÓÌÚ±È ÓÚÚÁÓÓ%ÓÓÁ%ÈÏÈfl±%±ÓÚÁ ±VMC-LM7 (ÎÁ Ó ÈÏ±, ±ÁÚÓfl) È Ì±·ÁÍfl LANC í %±ÍÍÓÈ, È%ÁÓÍ±Á ÁÈ%Ú, ÓÈÈ%ÁÓ±ÔÈ±±ÚÚ Á, ÈÏÁ, ÁÈ ÚÚÍÈ·È, ÚÓ·ÍÓ, Ó ÓÈÏ, ÓÍÍÓ, Ó ÍÓÌÚ±È±, ÈÒÓÓÍ, ÁÚfl %±ÍÍÚ, È%ÁÓÍ±Á Ú, Ì±·ÁÓÚÁ, È%ÁÓÓÍÁÈÁ ±.

Audio dubbing

You can record an audio sound to add to the original sound on a tape by connecting audio equipment or a microphone. If you use the VMC-LM7 adaptor (not supplied) to connect the audio equipment, you can add a sound on your recorded tape by specifying starting and ending points. The original sound will not be erased. You can only operate with the Remote Commander.



↔ : Signal flow / èÄ Å%±† ÒÈ,,ì†ì†

When using an external microphone, connect it to the MIC jack of the VMC-LM7 adaptor. If you record the sound using the built-in microphone of the camcorder, you do not need to connect the VMC-LM7 adaptor.

Notes on audio dubbing

- A new sound cannot be recorded on a tape already recorded in the 16-bit mode (32 kHz, 44.1 kHz or 48 kHz).
- When an external microphone is not connected, the recording will be made through the built-in microphone of the camcorder.
- A new sound cannot be recorded on a tape already recorded in the LP mode.
- If you add a new sound on a tape recorded by other camcorder (including DCR-PC7E), the sound quality may become worse.

ç° ÌÓÈÁÚÄ Ä±ÒÈÒ° ±Ú, Ä,ÚÍÓ,ÓÄ
 ÓÓÒ Ó,ÓÈ%ÄÌÈÄ%Ìfl%Ó°±,ÌÄÌÈfl ÍÈÒ,ÍÓ%lÓÍÚ
 Ä,ÚÍÚì†ÌÄÌÚÄ ÓÚÚÄÌÓÓ%ÓÓÄ%ÈÌÄÌÈfl
 ±Ú%ÈÒ±ÓÓ± ±ÚÚ ° ÈÌÈÌÈÍ ÓÚÓì±. ÓÓÌÈ Ç°
 ÈÒÓÓÌ,ÄÚÄÚÄ±%±ÓÚÄ VMC-LM7(ÌÄ
 Ó Èì±,±ÄÚÓfl)%ÌflÓÓ%ÓÓÄ%ÈÌÄÌÈfl
 ±Ú%ÈÒ±ÓÓ± ±ÚÚ °,Ç°ÌÓÈÁÚÄÄ±ÒÈÒ±Ú, Ä,ÚÍ
 Ì±Ç±Ú Ä±ÒÈÒ±ììÚ, ÌÄÌÚÚ ÓÚÚÄÌ ÚìÄ±ìÈfl
 Ì±±ì,ÌÓÈ È ÌÓÌÄ°ÌÓÈ ÚÓ°ÌÈ. àÒ,ÍÓ%lÈ Ä,ÚÍ
 ÌÄ,Ú%ÄÚ ÓÚÄ Ú. Ç° ÌÓÈÁÚÄ ÚÒ ±,flÚ, ÚÓÍ,ÍÓ
 Ó ÓÓÍÓ° ÓÚì,Ú± %ÈÒÚ±ÌÈÒìì,Ó
 ÚÒ ±,ÌÄÌÈfl.

è È ÈÒÓÓÌ,ÄÓ,±ìÈÈ, ÌÄ°ÌÄ,Ó ÌÈÍ ÓÚÓì±
 ÓÓ%ÓÓÄ%ÈÌÈÚÄÄ,Ó,ÌÄÄ%lMIC±%±ÓÚÄ ±
 VMC-LM7.
 ÓÓÌÈ Ç° Ä±ÒÈÒ° ±ÄÚÄ Ä,ÚÍ Ò ÈÒÓÓÌ,ÄÓ,±ìÈÄÌ
 ,ÓÚ ÓÄÌì,Ó ÌÈÍ ÓÚÓì±, Ç± ÌÄÌÈÈÍÓ
 ÓÓ%ÓÓÄ%ÈÌÈÚ±%±ÓÚÄ VMC-LM7.

è ÈÌÄ°±ìÈfl Í ÓÄ ÄÄ±ÒÈÒÈ Ä,ÚÍÓ,Ó
 ÓÓÒ Ó,ÓÈ%ÄÌÈÈfl
 • çÓ°,È Ä,ÚÍ ÌÄ ÌÓÈÁÚ. °Ú, Ä±ÒÈÒ±ì Ì±
 ÌÄÌÚÚ, Ó Ä%± ÈÚÄÌ,ÌÓ Ä±ÒÈÒ±ììÚ, ,16-
 .ÈÚÓ,ÓÌ ÄÈÈÌÄ (32 ÌÈ°, 44, 1 ÌÈ° ÈÌÈ 48
 ÌÈ°).
 • äÓ,,%± ÌÄ°ÌÈÈ ÌÈÍ ÓÚÓì ÌÄ ÓÓ%lÌ°Äì,
 Ä±ÒÈÒ° .Ú%ÄÚ, °ÓÌflflÚ,Ófl°Ä ÄÄ
 ,ÓÚ ÓÄÌì°È ÌÈÍ ÓÚÓì,È%ÄÓí±ÌÄ °.
 • çÓ°,È Ä,ÚÍ ÌÄ ÌÓÈÁÚ. °Ú, Ä±ÒÈÒ±ì Ì±
 ÌÄÌÚÄ, Ó Ä%± ÈÚÄÌ,ÌÓ Ä±ÒÈÒ±ììÓÈ,
 ÄÈÈÌÄ LP.
 • ÓÓÌÈ Ç° %Ó°±,ÌflÄÚÄ ÌÓ°,È Ä,ÚÍ Ì± ÌÄÌÚÚ,
 Ä±ÒÈÒ±ììÚ, Ì±%Ú,ÓÈ,È%ÄÓí±ÌÄ Ä
 (ÌÌ°±fl DCR-PC7E), Ì±°ÄÓÚ,Ó Ä,ÚÍ±
 ÌÓÈÁÚ ÓÚ±Ú, ÌÙÈÄ.

Advanced operations / ÌÓÒ,Ä°ÄÌÓÚ,Ó,flÌÄ ÓÄÄ ±ÈÈ

Audio dubbing

èÀ ÁÁ±ÖÈÒ, Á, ÛÍÓ, Ó, Ó
ÓÓÓ Ó, ÓÈ%ÀÌÈñ

Adding an audio sound on a recorded tape

- (1) Insert your recorded tape into the camcorder.
- (2) While pressing the small green button on the POWER switch, set it to PLAYER.
- (3) On the camcorder, press ▷ to set it to playback mode, and then locate the point where the recording ends by pressing ◀◀ or ▶▶. Then press ■ to set it to playback pause mode.
- (4) Press ZERO SET MEMORY on the Remote Commander. The ZERO SET MEMORY indicator flashes and the end point of the recording is stored in memory.
- (5) On the camcorder, locate the point where the recording should begin by pressing ◀◀ or ▶▶. Then press ■ to set it to playback pause mode.
- (6) Press AUDIO DUB on the Remote Commander.
- (7) Press ■ on the camcorder and at the same time start playing back the audio you want to record. The new sound will be recorded in stereo 2. The recorded sound in stereo 1 is not heard.

The recording stops automatically near the counter's zero point. Press ■ to set the camcorder to stop mode.

You can add the sound not using zero set memory function.

To change the end point

Press ZERO SET MEMORY on the Remote Commander so that the ZERO SET MEMORY indicator disappears and begin from step 3.

To play back the new recorded sound

Adjust the balance between the original sound (stereo 1) and the new sound (stereo 2) by selecting AUDIO MIX in menu system.

ÑÓ·±, ÌÀÌÈÁ Á, ÛÍÓ, Ó, Ó ÓÓÓ Ó, ÓÈ%À-
ÌÈñ Ì± Á±ÖÈÒ±ÌÛ, ÌÀÌÛ

- (1) ÇÒÚ±, ÛÁ Ç±Û Á±ÖÈÒ±ÌÛ, Ì±ÒÒÁÛÛ, È%ÀÓÌ±ÌÁ Û.
- (2) Ç±ÈÌÈ±ñ Ì±ÌÀÌ, ÌÛ ÁÀÌÀÌÛ, ÌÌÓÓÌÛ Ì±, ÌÛ±ÛÀÌÁ POWER ÛÓÛ±ÌÓ, ÈÛÁ Á, Ó, ÓÓÌÓÈÀÌÈÁ PLAYER.
- (3) Ç±ÈÌÈÛÁ ▷ Ì±, È%ÀÓÌ±ÌÁ Á %ñ ÛÓÛ±ÌÓ, ÌÈÁÀ Ì± ÁÈÈÌ, ÓÓÓ ÓÈÁ, Á%ÀÌÈñ, ±Á±ÛÀÌ Ì±È%ÈÛÁ ÛÓÛÛ ÓÌÓÛ±ÌÈñ Á±ÖÈÒÈ ÒÛÛÀÌ Ì±È±ÛÈñ ◀◀ ÈÌÈ ▶▶, á±ÛÀÌ Ì±ÈÌÈÛÁ ■ %ñ ÛÓÛ±ÌÓ, ÌÈ, È%ÀÓÌ±ÌÁ ° Ì± ÁÈÈÌ Ò±ÛÁ°, ÓÓÓ ÓÈÁ, Á%ÀÌÈñ.
- (4) Ç±ÈÌÈÛÁ ZERO SET MEMORY Ì± ÒÛÌ, ÛÁ %ÈÒÛ±ÌÈÒÌÌÓ, ÓÛÓ ±ÌÀÌÈñ. àÌ%ÈÌÈÛÓ ZERO SET MEMORY ·Û%ÁÛ ÌÈ, ±Û, È ÍÓÌÀÛ±ñ ÛÓÛÛ Á±ÖÈÒÈ Á±ÌÓÈÛÓñ, Ò±ÌÛ.
- (5) Ç±È%ÈÛÁ ÛÓÛÛ, %Á±ÖÈÒ, %ÓÌÈÈ± Ì±±Û, Òñ ÒÛÛÀÌ Ì±È±ÛÈñ ◀◀ ÈÌÈ ▶▶ Ì±, È%ÀÓÌ±ÌÁ Á. á±ÛÀÌ Ì±ÈÌÈÛÁ ■ %ñ ÛÓÛ±ÌÓ, ÌÈ, È%ÀÓÌ±ÌÁ ° Ì± ÁÈÈÌ Ò±ÛÁ°, ÓÓÓ ÓÈÁ, Á%ÀÌÈñ.
- (6) Ç±ÈÌÈÛÁ AUDIO DUB Ì± ÒÛÌ, ÛÁ %ÈÒÛ±ÌÈÒÌÌÓ, ÓÛÓ ±ÌÀÌÈñ.
- (7) Ç±ÈÌÈÛÁ ■ Ì±, È%ÀÓÌ±ÌÁ Á È Ó%ÌÓ, ÀÌÀÌÌÓ Ì±ÈÛÁ, ÓÓÓ ÓÈÁ, Ó%ÈÛ, ±Û%ÈÒÈÒÛÓÛÌÈÌ, ÍÓÛÓ °ÈÇ° ÍÓÛÛÁ Á±ÖÈÒ±Û, ÇÓ, °È Á, ÛÍ ·Û%ÁÛ Á±ÖÈÒ±Ì, ÒÛÁ ÁÓ ÁÈÈÌÁ 2. á±ÖÈÒ±ÌÈ Á, ÛÍ, ÒÛÁ ÁÓ ÁÈÈÌÁ 1 ÒÌ~ÀÌ ÌÀ ·Û%ÁÛ. á±ÖÈÒ, ÓÓÛ±Û, ÌÈ, ±ÁÛÓñ ±ÛÓÌ±ÛÈ~ÁÓÌÈ, ÌÈÁÈ ÌÛÌÁ, ÓÈ ÛÓÛÛÈ Ò~ÁÛ~ÈÌ±. Ç±ÈÌÈÛÁ ■ %ñ ÛÓÛ±ÌÓ, ÌÈ, È%ÀÓÌ±ÌÁ ° Ì± ÁÈÈÌ ÓÓÛ±ÌÓ. Ç° ÍÓÈÁÛÁ Á±ÖÈÒ, ±Û, Á, ÛÍ ·ÁÁ ÈÒÓÓÌ, ÁÓ, ±ÌÈñ ÛÛÌÈÈÈ Á±ÓÓÌÈ±ÌÈñ ÌÛÌÁ, ÓÈ ÛÓÛ±ÌÓ, ÌÈ.

ÑÌñ ÈÀÌÀÌÈÈñ ÍÓÌÀÛÌÈ ÛÓÛÛÈ Ç±ÈÌÈÛÁ ZERO SET MEMORY Ì± ÒÛÌ, ÛÁ %ÈÒÛ±ÌÈÒÌÌÓ, ÓÛÓ ±ÌÀÌÈñ Û±Ì, ÛÓ° ÈÌ%ÈÌÈÛÓ ZERO SET MEMORY ÈÒ~ÁÁ È Ì±ÈÌÈÛÁ ÓÓñÛ, Ò ÒÛÌÛ± 3.

ÑÌñ, ÓÓÓ ÓÈÁ, Á%ÀÌÈñ ÌÓ, Ó, Ó Á±ÖÈÒ±ÌÌÓ, Ó Á, ÛÍ± èÛ Á, ÛÌÈ ÛÈÛÁ. ±±ÌÒ ÌÁÈ%Û ÈÒÌÓ%Ì~Ì Á, ÛÍÓÌ (ÒÛÁ ÁÓ ÁÈÈÌ 1) È ÌÓ, Ì Á, ÛÍÓÌ (ÒÛÁ ÁÓ ÁÈÈÌ 2) ÒÛÛÀÌ, ° Ò ± AUDIO MIX, ÒÈÒÛÁÌÁ ÌÀÌ.

Additional information

Charging the vanadium-lithium battery in the camcorder

Your camcorder is supplied with a vanadium-lithium battery installed so as to retain the date and time, etc., regardless of the setting of the POWER switch. The vanadium-lithium battery is always charged as long as you are using the camcorder. The battery, however, will get discharged gradually if you do not use the camcorder. It will be completely discharged in about 1/2 year if you do not use the camcorder at all. Even if the vanadium-lithium battery is not charged, it will not affect the camcorder operation. To retain the date and time, etc., charge the battery if the battery is discharged. The following are charging methods:

- Connect the camcorder to mains using the supplied AC power adaptor, and leave the camcorder with the POWER switch turned off for more than 24 hours.
- Or, install the fully charged battery pack in the camcorder, and leave the camcorder with the POWER switch turned off for more than 24 hours.

When disposing of the camcorder

Remove the vanadium-lithium battery, and dispose of the camcorder and the vanadium-lithium battery according to the disposal system in your country. The vanadium-lithium battery is installed in the cassette compartment.

- (1) Remove the four screws at the bottom.
- (2) Remove the panel using a screwdriver.
- (3) Remove the two small screws on the circuit board and dispose of it together with the vanadium-lithium battery.

ΝΟΟΘΗΕΥΑΙ, ΙΤΗ ΕΙΥΟ ΙΤ'ΕΗ

ΑΤ, ΦΙ%ΟΙΤ, ΤΙΤ%ΕΑ, Ο-ΙΕΥΕΑ, ΟΕ :ΤΥΤ ΑΕΙΕ , Ε%ΑΟΙΤΙΑ Α

ΤΥΤ, Ε%ΑΟΙΤΙΑ Τ ΟΟΙΤ'ΑΙΤ, ΤΙΤ%ΕΑ, Ο-ΙΕΥΕΑ, ΟΕ :ΤΥΤ ΑΕΙΟΕ %ΦΙ ΟΟΙ, ΤΙΤ'ΕΗ %ΤΥΤ Ε ΑΙΤΙΕ Ε Υ%, ΙΑΑΤ, ΕΟΕΙΟ ΟΥ ΟΥΟΤΙΟ, ΙΕ, ΙΙ, ΤΥΑΤΗ POWER. ΤΥΤ%ΕΑ, Ο-ΙΕΥΕΑ, ΤΥΤ ΤΥΤ ΑΕΙΤ, ΟΑ, %Τ ΟΟ%ΑΤ ΠΕΤΑΥΟΦ, ΟΟΙΤ'Ε ΕΟΟΟΙ ΑΥΑΥΑ, Ε%ΑΟΙΤΙΑ Υ, Ε%ΟΙΤΙΟ, ΤΥΤ ΑΕΙΤ ΟΟΟΥΑΟΑΙΙΟ, Υ%ΑΥ ΤΑ ΠΕΤΥ ΟΦ, ΑΟΙΕ Τ' ΕΟΟΟΙ ΑΥΑΥΑ, Ε%ΑΟΙΤΙΑ Υ ΤΙΟ ΑΙΤΙΕ. ΕΙΤ ΟΟΙΙΟΟΥ, ΤΑ Π%ΕΥΟΦ Ο Ε-ΙΕΑΕΥΑΙ ΙΟ ΑΤ ΟΟΙ, Ο%Τ, ΑΟΙΕ Τ' ΙΑ ΟΥ%ΑΥΑ ΕΟΟΟΙ ΑΟ, ΤΥ, Ε%ΑΟΙΤΙΑ Υ, ΥΑ-ΑΙΕΑ %ΙΕΥΑΙ, ΙΟ, ΟΟΑ ΕΟ%Τ. ΝΤΕΑ ΑΟΙΕ, ΤΙΤ%ΕΑ, Ο-ΙΕΥΕΑ, ΤΥΤ ΑΕΙΤ ΙΑ ΑΤ ΠΕΑΙΤ, ΤΥΟ ΙΑ Υ%ΑΥ, ΙΕΗΥ, ΙΤ Τ' ΟΥΥ, Ε%ΑΟΙΤΙΑ °. ΝΙΗ ΟΟΙ, ΤΙΤ'ΕΗ %ΤΥΤ Ε, ΑΙΤΙΕ Ε Υ%. ΑΤ ΠΕΤΕΥΑ ΤΥΤ ΑΕΙΥ, ΑΟΙΕ :ΤΥΤ ΑΕΙΤ ΤΑ ΠΕΑΙΤ. ΕΥ-ΑΟΥ, Υ ΟΙΑ%ΟΥ, ΕΑ ΙΑΥΟ% ΑΤ Π%ΟΙΕ:

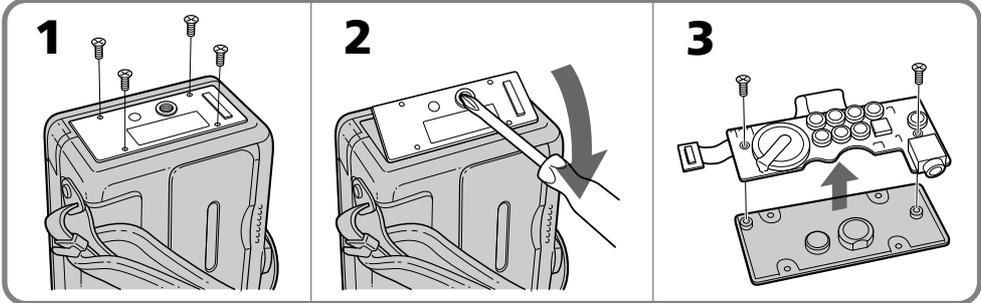
- εΟ%ΟΟΑ%ΕΙΕΥΑ Ε%ΑΟΙΤΙΑ Υ ΙΑΙΥ Ε ΑΟΙΟΕ ΟΑΥΕ Ο ΕΟΟΟΙ ΑΟ, ΤΙΕΑΙ Ο ΕΙΤ, ΤΑΙΟ, ΟΟΑΥΑ, Ο, ΟΤ%ΤΟΥΑ ΤΟΑ ΑΙ. ΟΟΙΤ'ΕΟΟΥΤ, ΥΑ, Ε%ΑΟΙΤΙΑ ΥΟ Ε, ΙΙ ΑΙΙΟΙ, ΙΙ ΤΥΑΙΑ POWER ΟΙΑΑ, ΑΙ ΙΤ 24 Τ'ΟΤ.
- ΙΟΥΤΙΟ ΕΥΑ ΟΟΙΙΟΟΥ, ΑΤ ΠΕΑΙΤ'Ε ΤΥΤ ΑΕΙ'Ε -ΙΟΙ, Ε%ΑΟΙΤΙΑ Υ Ε ΟΟΥΤ, ΥΑ, Ε%ΑΟΙΤΙΑ Υ Ο Ε, ΙΙ ΑΙΙΟΙ, ΙΙ ΤΥΑΙΑ POWER ΟΙΑΑ, ΑΙ ΙΤ 24 Τ'ΟΤ.

Ε Ε ΙΕΙ, Ε%Τ'ΕΕ, Ε%ΑΟΙΤΙΑ °

Ι%ΤΙΕΥΑ, ΤΙΤ%ΕΑ, Ο-ΙΕΥΕΑ, Υ, ΤΥΤ ΑΕΙΥ Ε ΙΕΙ, Ε%Ε ΥΕΥΑ, Ε%ΑΟΙΤΙΑ Υ Ε, ΤΙΤ%ΕΑ, Ο-ΙΕΥΕΑ, Υ, ΤΥΤ ΑΕΙΥ, ΟΟΟΥ, ΑΥΟΥ, ΕΕ Ο ΟΕΟΥΑΙΟΕ ΙΕΙ, Ε%Τ'ΕΕ, Τ'ΑΕ ΟΥ ΤΙΑ, ΤΥΤ%ΕΑ, Ο-ΙΕΥΕΑ, ΤΥΤ ΑΕΙΤ ΟΥΟΤΙΟ, ΙΑΙΤ, ΙΤ ΟΟΑΥΙΟΙ ΟΥΟΑΙΑ.

- (1) ΕΥΙ ΟΥΕΥΑ Τ'ΑΥ Α, ΕΙΥΤ ΙΤ %ΙΕ'Α.
- (2) ΕΙΕΙΕΥΑ ΟΤΙΑΙ, Ο ΕΟΟΟΙ ΑΟ, ΤΙΕΑΙ ΟΥ, Α ΥΙΕ.
- (3) ΕΥΙ ΟΥΕΥΑ %, Τ ΙΤΙΑΙ ΙΕΙ, ΕΙΥΤ ΙΤ ΙΟΙΥΤΕΙΟΕ ΟΤΥΑ Ε ΙΕΙ, Ε%Ε ΥΕΥΑ, ΙΑΟΥΑ Ο, ΤΙΤ%ΕΑ, Ο-ΙΕΥΕΑ, ΟΕ :ΤΥΤ ΑΕΙΟΕ.

Additional information / ΝΟΟΘΗΕΥΑΙ, ΙΤΗ ΕΙΥΟ ΙΤ'ΕΗ



Resetting the date and time

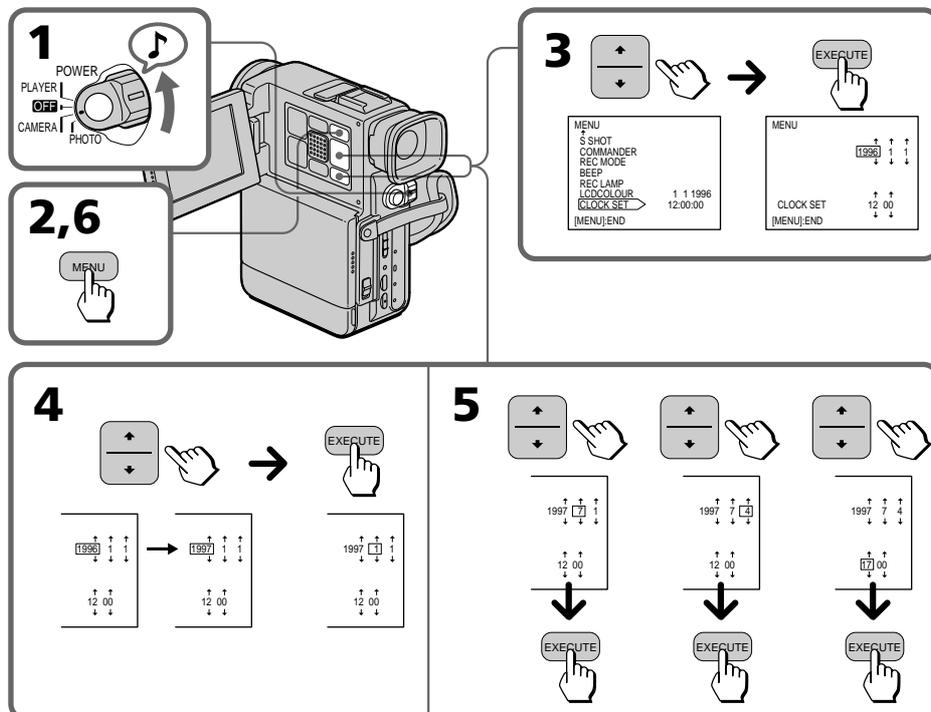
Επαναφορά ημερομηνίας και ώρας

The date and time are set at the factory. Set the time according to your local time. If you do not use the camcorder for about a year, the date and time settings may be released (bars may appear) because the vanadium-lithium battery installed in the camcorder will have been discharged. In this case, first charge the vanadium-lithium battery, then reset the date and time.

- (1) While pressing the small green button on the POWER switch, set it to CAMERA.
- (2) Press MENU to display the menu on the LCD screen.
- (3) Select CLOCK SET, then press EXECUTE.
- (4) Press \blacktriangledown or \blacktriangle to adjust the year, and then press EXECUTE.
- (5) Set the month, day, hour and minutes by pressing \blacktriangledown or \blacktriangle and pressing EXECUTE.
- (6) Press MENU to erase the menu display.

Ημερομηνία και ώρα ορίζονται στο εργοστάσιο. Ρυθμίστε την ώρα σύμφωνα με την τοπική ώρα. Εάν δεν χρησιμοποιήσετε την κάμερα για περίπου ένα χρόνο, οι ρυθμίσεις ημερομηνίας και ώρας μπορεί να χαθούν (εμφανίζονται γραμμές) επειδή η μπαταρία βανადίου-λιθίου που είναι εγκατεστημένη στην κάμερα έχει εκφορτιστεί. Σε αυτή την περίπτωση, πρώτα φορτίστε την μπαταρία βανადίου-λιθίου, και στη συνέχεια επαναφέρετε την ημερομηνία και την ώρα.

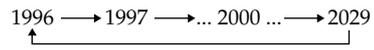
- (1) Πατώντας το μικρό πράσινο κουμπί του διακόπτη ΠΡΩΤΟΡΕΠΗΓΗΣ, ρυθμίστε την κάμερα.
- (2) Πατήστε ΜΕΝΟΥ για να εμφανιστεί το μενού στην οθόνη LCD.
- (3) Επιλέξτε ΡΥΘΜΙΣΗ ΩΡΑΣ, και πατήστε ΕΚΤΕΛΕΣΗ.
- (4) Πατήστε \blacktriangledown ή \blacktriangle για να ρυθμίσετε το έτος, και πατήστε ΕΚΤΕΛΕΣΗ.
- (5) Ρυθμίστε τον μήνα, την ημέρα, την ώρα και τα λεπτά πατώντας \blacktriangledown ή \blacktriangle και πατώντας ΕΚΤΕΛΕΣΗ.
- (6) Πατήστε ΜΕΝΟΥ για να αφαιρεθεί η οθόνη μενού.



To correct the date and time setting

Repeat steps 2 to 5.

The year indicators changes as follows:

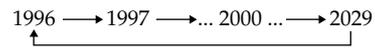


Note on the time indicator

The internal clock of this camcorder operates on a 24-hour cycle.

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àì%óÈí†úó „ó%ó† ÈÁíΆìfiÁúòfi òíÁ%óÛ ζÈí
ó. †Áóí:



è ÈíÁ~†ìÈÁ í Èì%óÈí†úó Û , ΆíΆìÈ
Çóú óÁìì°Á ~†ò° %ó†ììóÈ ,È%óΆóí†íÁ °
†·óú†,Û , 24-~†òó,óí ^ÈíÁ.

Usable cassettes and playback modes

àÒÒÓÍ, ÁÚÁÍ, Á Í±ÒÒÁÚ° È
 ÁÊËÏ°, ÓÒÒ ÓËÁ, Á%ÒÁÏËÏ

Selecting cassette types

You can use the mini DV cassette only. You cannot use any other **8** mm, **Hi8** Hi8, **VHS** VHS, **S-VHS** S-VHS, **VHS-C** VHSC, **S-VHS-C** S-VHSC or **B** Betamax cassette.

When you play back

Copyright signal

Using this camcorder, you cannot play back a tape that has recorded a copyright control signals for copyright protection of software. "COPY INHIBIT" appears on the LCD screen, in the viewfinder or on the TV screen if you try to play back such a tape. This camcorder does not record copyright control signals on the tape when it records.

Audio mode

12-bit mode: The original sound can be recorded in stereo 1, and the new sound in stereo 2 in 32 kHz. The balance between stereo 1 and stereo 2 can be adjusted by selecting AUDIO MIX in the menu system during playback. Both sounds can be played back.

16-bit mode: A new sound cannot be recorded but the original sound can be recorded in high quality. Moreover, it can also play back sound recorded in 32 kHz, 44.1 kHz or 48 kHz. When playing back a tape recorded in the 16-bit mode, 16BIT indicator appears on the LCD screen or in the viewfinder.

You cannot record in the 16-bit mode using this camcorder.

Recording mode

When you play back a tape, the SP/LP indicator on the LCD screen or in the viewfinder shows the recording mode SP/LP.

Note on cassette memory

The cassette memory function cannot be used with this camcorder.

Ç°·Ó ÚËÒÓ, Í±ÒÒÁÚ

Ç° ÍÓËÁÚÁ ÈÒÒÓÍ, ÁÓ, ±Ú, ÚÓÍ, ÍÓ Í±ÒÒÁÚ° mini DV. Ç° ÍÁ ÍÓËÁÚÁ ÈÒÒÓÍ, ÁÓ, ±Ú, Í±ÒÒÁÚÚ Í±ÍÚ, -Ï-Ó %Ò, Ú, Í±ÒÒÁÚÚ **8** Ï, **Hi8** Hi8, **VHS** VHS, **S-VHS** S-VHS, **VHS-C** VHSC, **S-VHS-C** S-VHSC ËÏ **B** Betamax.

äÒ, %Ò±Ç°, ÓÒÒ ÓËÁ, Ó%ÒËÚÁ

ëË, Ì±Í ±, ÚÓ ÒÍÓ, Ó Ò ±, ± àÒÒÓÍ, ÁÚÍñ %Ò±ÍÚ, È%ÒÁÓÍ±ÍÁ Û Ç° ÍÁ ÍÓËÁÚÁ, ÓÒÒ ÓËÁ, ÁÒÓË ÍÁÍÚ, ÍÓÓÓ ññ·Í± Á±ÒËÒ±Í± Ò ÈÒÒÓÍ, ÁÓ, ±ÏËÁ ÍÓÍÚ ÓÍ, Ì, ÒË, Ì±ÍÓ, ±, ÚÓ ÒÍÓ, Ó Ò ±, ± %Òñ Á±ËÚ° ±, ÚÓ ÒÍÓ, Ó Ò ±, ± Ó, ±Í. "COPY INHIBIT" ÓÓñ, ÌñÁÚÓñ Ì± "Í ±ÍÁ ÚáÑ, , È%ÒËËÒ±ÚÁÍÁ ËÏ Ì± "Í ±ÍÁ ÚÁÍÁ, ÉÁÓ ±, ÁÓÍË Ç° Ò·Ú±ÁÚÁÓ, ÓÒÒ ÓËÁ, ÁÒÓË Ú±ÍÚ, ÍÁÍÚ. Ñ±Í±ñ, È%ÒÁÓÍ±ÍÁ ± ÍÁ Á±ÒËÒ, ±ÁÚ ÍÓÍÚ ÓÍ, Ì, Á ÒË, Ì±" ±, ÚÓ ÒÍÓ, Ó Ò ±, ± Ì± ÍÁÍÚÁ, Ó, Áññ Á±ÒËÒË.

ÄÚ%ÒËÓ ÁÊËÏ

12-ËÚÓ, È ÁÊËÏ: àÒÍÓ%ÒÍ È Á, ÚÍ ÍÓËÁÚ·Ú, Á±ÒËÒ±Í, ÓÚÁ ÁÓ ÁÊËÏÁ 1, ± ÍÓ, È Á, ÚÍ, ÓÚÁ ÁÓ ÁÊËÏÁ 2 Ì± ±ÒÓÓÚÁ 32 ÍË. Á±Í±ÍÓ ÍÁË%ÒÚ ÓÚÁ ÁÓ ÁÊËÏÍÓ 1 È ÓÚÁ ÁÓ ÁÊËÏÍÓ 2 ÍÓËÁÚ·Ú, ÓÚ Á, ÚÍË Ó, ±Í ÓÚÚÁÍ, °. Ó ± AUDIO MIX, ÒËÓÚÁÍÁ ÍÁÍ, Ó, Áññ, ÓÒÒ ÓËÁ, Á%ÒÁÏËÏ. é·± Á, ÚÍÓ, Í ÓÒÓ Ó, ÓËË%ÒÁÏËÏÍÓ, ÚÚ·Ú, ÓÒÒ ÓËÁ, Á%ÒÁÏË°. 16-ËÚÓ, È ÁÊËÏ: çÓ, È Á, ÚÍ ÍÁ ÍÓËÁÚ·Ú, Á±ÒËÒ±Í, ÍÓ ÈÒÍÓ%ÒÍ È Á, ÚÍ ÍÓËÁÚ·Ú, Á±ÒËÒ±Í Ò, °ÓÍËÏ Ì± ÁÒÓ, ÓÍ. äÒ, ÒÁÍÚ, È%ÒÁÓÍ±ÍÁ ±ÍÓËÁÚ, ÓÒÒ ÓËÁ, Ó%ÒËÚ, Á, ÚÍ, Á±ÒËÒ±Í È Ì± ±ÒÓÓÚÁ 32 ÍË, 44,1 ÍË ÈÏÈ 48 ÍË. è È, ÓÒÒ ÓËÁ, Á%ÒÁÏËÏ ÍÁÍÚ, Á±ÒËÒ±ÍÓË, 16-ËÚÓ, ÓÍ ÁÊËÏÁ ÈÏ%ËÏ±ÚÓ, 16BIT ÓÓñ, ÌñÁÚÓñ Ì± "Í ±ÍÁ ÚáÑ ÈÏÈ, È%ÒËËÒ±ÚÁÍÁ. Ç° ÍÁ ÍÓËÁÚÁ Ó ÓËÁ, Ó%ÒËÚ, Á±ÒËÒ, 16-ËÚÓ, ÓÍ ÁÊËÏÁ Ò ÈÒÒÓÍ, ÁÓ, ±ÏËÁÍ %Ò±ÍÓËÈ, È%ÒÁÓÍ±ÍÁ °.

èÁÊËÏ Á±ÒËÒË

è È, ÓÒÒ ÓËÁ, Á%ÒÁÏËÏ ÍÁÍÚ ÈÏ%ËÏ±ÚÓ SP/LP Ì± "Í ±ÍÁ ÚáÑ ÈÏÈ, È%ÒËËÒ±ÚÁÍÁ ÓÓÍ±Á, ±ÁÚ ÁÊËÏ Á±ÒËÒË SP/LP.

è ÈÍÁ±ÏËÁ Í Á±ÒÓÍËÏ±ÏËÓ Í±ÒÒÁÚ° ÌÚÍËÏñ Á±ÒÓÍËÏ±ÏËÏ Ì±ÒÒÁÚ° ÍÁ ÍÓËÁÚ·Ú, ÈÒÒÓÍ, ÁÓ, ±Ï Ì± %Ò±ÍÓËÈ, È%ÒÁÓÍ±ÍÁ Á.

Notes on the mini DV cassette

To prevent accidental erasure

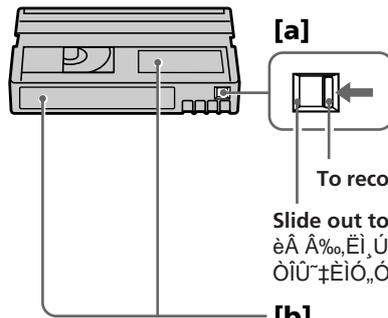
Slide out the protect tab on the cassette so that the red portion is visible. [a]

When affixing a label on the mini DV cassette

Be sure to affix a label on only the location as illustrated below so as not to cause malfunction of the camcorder. [b]

After using the mini DV cassette

Rewind the tape to the beginning, put the cassette in its case, and store it in an upright position.



è ÈÏÄ~±lËñl í Í±ÒÒÄÚÄ mini DV

Νίφι Ó Ä%ÓÚ, ±ÄlËñl ÓlÚ~±ÈlÓ,,Ó
 ÓÚÈ ±lËñl
 èÄ Ä%,Èl,ÚÄ Ä±ÈÚlÈ lÄÖÄÓÚlÍ ±Í±ÒÒÄÚÄ
 Ú±l, ~ÚÓ.° ·Í± ,È%l± í ±lÒl±ñl lÄÚl±. [a]

è È Ó ÈlÄÈ,±lËÈ ~ÚÈlÄÚlÈ ±
 Í±ÒÒÄÚÚ mini DV
 é.ñÄ±ÚÄl,ÍÓ ±lÍÄÈÚÄ ~ÚÈlÄÚlÚ ÓlÍ,ÍÓ ±
 lÄÓÚÓ, Úl±Ä±lÍÓÄ lËÈÄ ± ÈÓÚlÄ, Ú±l,
 ~ÚÓ.° lÄ ;Ä,±Ú, ÓÓ, ÄÈ%ÄlÈÄ
 ,È%ÄÓl±lÄ°. [b]

èÓÒlÄ ÈÒÓl,ÁÓ,±lËñl í±ÒÒÄÚ° mini
 DV
 èÄ ÄlÓÚ±ÈÚÄ lÄlÚÚ l±Ä±% l± l±ñlÓ,
 ÓlÍÓÈÈÚÄ l±ÒÒÄÚÚ, ÄÄ ÚÚÚñl Èl ±lÈÚÄ ÄÄ,
 ,Ä ÚÈl±l,ÍÓl ÓÓlÓÈÄlËÈ.

We recommend to use an ME cassette

You can get the highest quality pictures with this camcorder using an ME cassette which is the highest quality cassette.

You may not get as good quality with lesser quality cassettes.

â° ÄlÓlÄl%ÚÄl ÈÒÓl,ÁÓ,±Ú, í±ÒÒÄlÚ
 äÖ
 Ç° lÓÈÄÚÄ ÓÓlÚÈÚ, l±È,°ÓÄÄ l±ÄÒÚ,Ó
 ÈÄÓ. ±ÈÄlËñl l± Ç±ÄÈ ,È%ÄÓl±lÄ Ä Ó
 ÈÒÓl,ÁÓ,±lËñl l±ÒÒÄÚ° äÖ, lÓÚÓ ±ñl
 Ó·l±%±ÄÚ l±È,°ÓÈl l±ÄÒÚ,Ól.
 Ç° lÄ lÓÈÄÚÄ ÓÓlÚÚ, lÓ Ó·Ó,Ó l±Ä,ÒÚ,±
 Ó ÈÈÒÓl,ÁÓ,±lËÈ lÚ%Èl l±ÒÒÄÚ.

Tips for using the battery pack

•

This section shows you how you can get the most out of your battery pack.

Preparing the battery pack

Always carry additional batteries

Have sufficient battery pack power to do 2 to 3 times as much recording as you have planned.

Battery life is shorter in a cold environment

Battery efficiency is decreased, and the battery will be used up more quickly, if you are recording in a cold environment.

To save battery power

Do not leave the camcorder in Standby mode when not recording to save the battery power. A smooth transition between scenes can be made even if recording is stopped and started again. While you are positioning the subject, selecting an angle, or looking at the LCD screen or through the viewfinder, the lens moves automatically and the battery is used. The battery is also used when a tape is inserted or removed.

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When to replace the battery pack

While you are using your camcorder, the remaining battery indicator on the LCD screen or in the viewfinder decreases gradually as battery power is used up [a]. The remaining time in minutes also appears.



When the remaining battery indicator reaches the lowest point, the  indicator appears and starts flashing in the viewfinder. When the  indicator in the viewfinder changes from slow flashing to rapid flashing while you are recording, set the POWER switch to OFF on the camcorder and replace the battery pack. Leave the tape in the camcorder to obtain a smooth transition between scenes after the battery pack has been replaced. Depending on conditions, the  indicator may flash, even if there are 5 to 10 minutes remaining.

Notes on the rechargeable battery pack

Caution
Never leave the battery pack in temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight.

The battery pack heats up
During charging or recording, the battery pack heats up. This is caused by energy that has been generated and a chemical change that has occurred inside the battery pack. This is not cause for concern, and is normal.

è È ÁτĪĀĪĀ τÚτ ĀÈĪÓ,,Ó ĩÓĪτ

äÓ,,%τÇ° ÈÖÖÓĪ,ĀÚĀÚĀ,È%ĀÓĪτĪĀ Ú, ÈĪ%ÈĪτÚÓ ÓÓÚτ,Ā,,ÓÓηĀτ η%ττÚτ ĀÈĪÓ,,Ó ĩÓĪτ, ,È%ÓÈÖĪτÚĀĪĀ È, ÓĪÓĪĀ %ÈÖÖĪĀη ÓÓÓÚĀÓĪĪÓ ÚĪĪĪ, τĀÚÓη ÓÓĪĀ Ā ÈÖÖÓĪ,ĀÓ,τĪÈη Āτ η%ττÚτ ĀÈĪÓ,,Ó ĩÓĪτ [a]. τĪĪÈĀ ÓÓη,ĪηĀÚÓη ÓÓÚτ,ĀĀÓη, ĀĪη, ĪÈĪÚÚτ.

äÓ,,%τÈĪ%ÈĪτÚÓ ÓÓÚτ,Ā,,ÓÓηĀτ η%ττÚτ ĀÈĪÓ,,Ó ĩÓĪτ%ÓÓÚÈ,τĀÚ ĪτÈĪÈĀĀÈ ÚÓĪÈ, ÈĪ%ÈĪτÚÓ  ÓÓη,ĪηĀÚÓη È ĪτÈĪτĀÚ ĪÈ,,τÚ, ,È%ÓÈÖĪτÚĀĪĀ. äÓ,,%τÈĪ%ÈĪτÚÓ  È%ÓÈÖĪτÚĀĪĀ ÈĀĪĪηĀÚ ĪĀ%ĪĪĪÓĀ ĪÈ,,τĪÈĀ Īτ °ÓÚ ÓĀ ĪÈ,,τĪÈĀ,Ó, ĀĪηĀτÓÈÖÈ, ÚÓÚτĪÓ,ÈÚĀ, °Ī, τÚĀĪ POWER, ÓÓĪÓÈĀĪÈĀ OFF Īτ,È%ĀÓĪτĪĀ Ā È ÁτĪĀĪÈÚĀ τÚτ ĀÈĪÈ ĩÓĪ. éÓÚτ, ÚĀ ĪĪĪÚÚ, ,È%ĀÓĪτĪĀ Ā %Īη ÓÓĪÚĀĪÈη ÓĪτ,ĪÓ,Ó ÓĀ ĀĪÓ%τ ĪĀÈ%ÓÚ ÒĀĪτĪÈ ÓÓÓĪĀ ÁτĪĪĪ° τÚτ ĀÈĪÓ,,Ó ĩÓĪτ. ÇĀτ,ÈÖÈĪÓÓÚÈÓÓÚÓÓÚÓηÚĀĪ ÓÚ,ÈĪ%ÈĪτÚÓ  ĪÓÈĀÚĪÈ,,τÚ,, %ττÈĀ ĀÓĪÈ ÓÓÚτĪÓÓ,ĀĀ ÓÚ 5%Ó 10ĪÈĪÚÚ.

è ÈĪĀτĪÈη Ī ÓĀ ĀĀτ ηÈτĀĪÓĪÚ τÚτ ĀÈĪÓĪÚ ĩÓĪÚ

èĀ%ÓÓÚĀĀÈĀĪÈĀ çÈĪÓ,,%τ ĪĀ ÓÓÚτ,ĪηÈÚĀ τÚτ ĀÈĪÈ ĩÓĪ Ó È ÚĀĪÓĀ τÚÚĀ Ó,Ā 60°C (140°F), ĪτĪ ĪτÈĪĀ, , τÚÓĪÓÈĪĀ, ÓÈÓτ ĪÓ,τĪĪÓĪ Īτ ÓÓĪĪĀ ÈĪÈ ÓÓ% Ó ηĪĪÈ ÓÓĪĪĪĪĪÈ ĪÚτĪÈ.

ĀτÚτ ĀÈĪÈ ĩÓĪ Īτ,, Ā,τĀÚÓη ÇÓ, ĀĪηĀτ η%ĪÈÈĪÈĀτÓÈÈ τÚτ ĀÈĪÈ ĩÓĪ Īτ,, Ā,τĀÚÓη. ùÚÓ, °Ā,τĪÓ „ĀĪĀ È ÚĀĪÓÈ ĪĀ,ÈĀÈ È ĪÈĪÈĀÓĪÈĪÈ ĀτĪÈηĪÈ,ĪÓÚÓ ĀÓ ÓÈÖĪÓ%ηÚ,ĪÚÚ È τÚτ ĀÈĪÓ,,Ó ĩÓĪτ. ùÚÓ ĪĀ %ÓĪÈĪÓ °Ú, ÓÈÈĪÓÈ%ĪηĀÓÓĪÓÈÓÚ,τÈη,ĪηĀÚÓη ĪÓ ĪτĪ,ĪĪ.

Tips for using the battery pack

• **InfoLITHIUM** battery pack

“InfoLITHIUM” battery pack

The “InfoLITHIUM” battery pack is a lithium battery pack which can exchange data with compatible video equipment about its battery consumption.

Sony recommends that you use the “InfoLITHIUM” battery pack with video equipment having the  InfoLITHIUM mark. When you use this battery pack with video equipment having the  InfoLITHIUM mark, the video equipment will indicate the remaining battery time in minutes.* However, if you use it with video equipment not having this mark, the remaining battery capacity will not be indicated in minutes.

* The indication may not be accurate depending on the condition and environment which the equipment is used under.

Battery pack care

- **Remove the battery pack from the camcorder after using it**, and keep it in a cool place. When the battery pack is installed to the camcorder, a small amount of current flows to the camcorder even if the POWER switch is set to OFF. This shortens battery life.
- The battery pack is always discharging even when it is not in use after charging. Therefore, you should charge the battery pack right before using the camcorder.

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Maintenance information and precautions

àìÙÓ ì†Èñ ÒÓ Ùì%Ò Æ†
†Ô†††ÙÓÈÔ Æ%ÒÒÙÓ ÓÈìÓÙÈ

Moisture condensation

If the camcorder is brought directly from a cold place to a warm place, moisture may condense inside the camcorder, on the surface of the tape, or on the lens. In this condition, the tape may stick to the head drum and be damaged or the camcorder may not operate correctly. To prevent possible damage under these circumstances, the camcorder is furnished with moisture sensors. Take the following precautions.

Inside the camcorder

If there is moisture inside the camcorder, the beep sounds and the  indicator flashes. If this happens, none of the function except cassette ejection will work. Open the cassette compartment, turn off the camcorder, and leave it about 1 hour. When  indicator flashes at the same time, the cassette is inserted in the camcorder. Eject the cassette, turn off the camcorder, and leave also the cassette about 1 hour.

On the lens

If moisture condenses on the lens, no indicator appears, but the picture becomes dim. Turn off the power and do not use the camcorder for about 1 hour.

How to prevent moisture condensation

When bringing the camcorder from a cold place to a warm place, put the camcorder in a plastic bag and allow it to adapt to room conditions over a period of time.

- (1) Be sure to tightly seal the plastic bag containing the camcorder.
- (2) Remove the bag when the air temperature inside it has reached the temperature surrounding it (after about 1 hour).

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ÒÒìÈ,È%ÒÓì†ìÄ †Ô ÈìÀÒÀì†Ô ñìÓÈÄ ìÓì%ÒìÓ,Ò ìÄÒÙ†, ÙÁÒìÓÄ ìÄÒÙÓ, ì†„È ìÓÈÄÙ ÒìÓì%ÒÀìÒÈ Ò,†Ù Òñ,ìÙ È,È%ÒÓì†ìÄ °, ì† ÒÓ,Ä ììÓÙÈ ìÄìÙ° ÈìÈ ì† Ó·ÄìÙÈ,Ä. Ç Ù†ìÓ ÒÓÒÙÓñìÈÈ ìÄìÙ†ìÓÈÄÙ Ò ÈìÈÒìÙ, ì †††ìÙ „ÓìÓ,ìÈ È ·Ù%ÒÁÙ ÒÓ, ÄÈ%ÒÀì†, ÈìÈ,È%ÒÓì†ìÄ † ìÄ ÒìÓÈÄÙ †·ÓÙ†Ù, Ò †,Èì,ìÓ. Ñìñ Ò Ä%ÒÓÙ, †·ÄìÈñ,ÓÄìÒÈìÓ,Ò ÒÓ, ÄÈ%ÒÀìÈñ „È%ÒÙ Ù†ìÈ: Ò·ÓÙÓñÙÄì ÒÙ,, È%ÒÓì†ìÄ † Òì†·ÈÄì† %Ò†Ù·Èì†ìÈ, ì†„È. è·ì.%Ò†ÈÙÄÒìÄ%ÒÙ,ÈÄÒ Ä%ÒÒÙÓ ÒÈìÓÙÈ.

ÇìÙÙ È,È%ÒÓì†ìÄ ° ÒÒìÈ,ìÙÙ È,È%ÒÓì†ìÄ ° ÒÓÈÁÓ†† ìÓì%ÒÀìÒ†Èñ ì†„È, ÙÓ ·Ù%ÒÁÙ Ä,Ù†Ù, ÄÙìÄ ìÈ ÒÈ,ì†ì, È Èì%ÒÈì†ÙÓ  ·Ù%ÒÁÙ ìÈ,†Ù. ÒÒìÈ °Ó ÒìÙ·ÈìÓ, ÙÓ ìÈì†ìÈÄ ÙÙì·ÈÈ, ì ÓìÄ, °Ù†ìÈ,†ìÈñ ì†ÒÒÄÙ, ìÄ ·Ù%ÒÙ †·ÓÙ†Ù,·éùì ÓÈÙÄì†ÒÒÄÙì·ÈÓÙÒÄì, °ìì °ÈÙÄ,È%ÒÓì†ìÄ Ù È ÒÓÙ†, ÙÄ ÄÄ Ò È·ÈÄÈÙÄì ìÓ ì† 1 °†Ò. ÒÒìÈ Èì%ÒÈì†ÙÓ  ·Ù%ÒÁÙ ìÈ,†Ù, ÙÓ ÈÄ Ò†ìÓÄ, Äñ, ÙÓ Äì†·ÈÙ ì†ÒÒÄÙ†, ÒÙ†·Äì†,È%ÒÓì†ìÄ Ù. Ç·ÙÓììÈÈÙÄ ì†ÒÒÄÙÙ, °ìì °ÈÙÄ,È%ÒÓì†ìÄ ÙÈÒÒÙ†, ÙÄì†ÒÒÄÙÙ·ÄÄ ÈÒÒÓì,ÁÓ,†ìÈñ Ù†ìÈÄ Ò È·ÈÄÈÙÄì,ìÓ ì† 1 °†Ò.

ç† Ó·ÄìÙÈ,Ä ÒÒìÈ,ì†„È ÒìÓì%ÒÀìÒÈ Ò,†ì†Ò, ì† Ó·ÄìÙÈ,Ä, ìÈì†ìÈÄ Èì%ÒÈì†ÙÓ ° ÒÓñ,ìñÙ Òñ ìÄ ·Ù%ÒÙ, ìÓ ÈÄÓ. †ÈÄìÈÄ ÒÙ†ìÄÙ ÙÙÒìì·ì. Ç·ìì·ÈÈÙÄ ÒÈÙ†ìÈÄ È ìÄ ÈÒÒÓì,ÄÙÈÙÄ,È%ÒÓì†ìÄ Ù Ò È·ÈÄÈÙÄì,ìÓ 1 °†Ò.

ä†ì Ò Ä%ÒÓÙ, †ÙÈÙ, ìÓì%ÒÀìÒ†Èñ, ì†„È È ÒÒìÈ,È%ÒÓì†ìÄ †Ô ÈìÀÒÀì†ÈÄ ìÓì%ÒìÓ,Ò ìÄÒÙ†, ÙÁÒìÓÄ ìÄÒÙÓ, ÙÓ ÒÓìÓÈÈÈÙÄ,È%ÒÓì†ìÄ Ù, ÒÒìÈ °ÓÈììÓ,È Ò†ìÄÙ È %Ò†ÈÈÙÄ ÄÈ †%Ò†ÒÙÈ Ò,†Ù Òñ ììÓì†ìÙì·ì ÙÓìÓ,Èñ ì† ìÄìÓÙÓ °È ÒÄ ÈÒ%Ò, ÄìÄìÈ.

- (1) è·ñÄ†ÙÄì,ìÓ ÒìÓìÓìÓ Ä†ì ÒÈÙÄ ÒÒìÈ °ÓÈììÓ,È Ò†ìÄÙ, ÒÓ%ÒÄ È†·ÈÈ ì†ìÄ Ù.
- (2) Ç·ì, ÙÄ ì†ìÄ Ù, ìÓ, %Ò† ÙÄìÒÄ †ÙÙ †, ÒÄ%ÒÙì†,ìÙÙ ÈÒ†ìÄÙ†%ÒÒÙÈ,ìÄÙ ÙÄìÒÄ †ÙÙ ° Òì ÙÈ†,·Ä,Ó,ÒÄ%ÒÙ† (Ò È·ÈÄÈÙÄì,ìÓ °Ä ÄÄ 1 °†Ò).

Video head cleaning

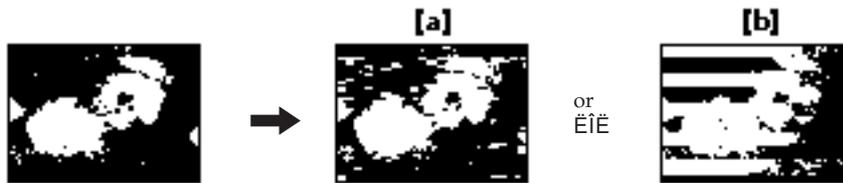
To ensure normal recording and clear pictures, clean the video heads.

The video heads may be dirty when:

- mosaic-pattern noise appears on the playback picture
- playback pictures do not move
- playback pictures are hardly visible
- playback pictures do not appear
- the  indicator and "  CLEANING CASSETTE" message appear one after another or the  indicator flashes on the LCD screen or in the viewfinder

é~ÈÒÙÍ† ,È%ÔÓ,,ÓÍÓ,ÓÍ

Νίφι Ó·ΑÔÔΑ~ΑίÈñ ÌÓ Ì†Ì ÌÓÈ Α†ÔÈÒÈ È
 ~ΑΰÍÓ,,ÓÈÁÓ· †ÈΑίÈñ Ó~È~†ÈÙΑ
 ,È%ÔÓ,,ÓÍÓ,ÍÈ.
 ÇÈ%ÔÓ,,ÓÍÓ,ÍÈ Ì†,Â ÌÓÂ Α†, ñΑíÀì°, ÌÓ,,%†:
 • àÓΑ†È~ì†ñ ÒÂÙì† ÒÓÍΑì ÒÓñ,ÌñΑΰÓñ Ì†
 ,ÓÓÓ ÓÈÁ,Ó%ÈíÒÈÁÓ· †ÈΑίÈÈ.
 • ÇÓÓÓ ÓÈÁ,Ó%Èí~ΑÈÁÓ· †ÈΑίÈñÌÀ
 ÒÂ ΑíÀ~Α†, ÙÓñ.
 • ÇÓÓÓ ÓÈÁ,Ó%ÈíÒÈÁÓ· †ÈΑίÈÈ
 ÙÙ%ÌÓÓ ÒÓ†Ù È,†ΑíÒÀ.
 • ÇÓÓÓ ÓÈÁ,Ó%ÈíÒÈÁÓ· †ÈΑίÈÈΑ
 ÒÓñ,ÌñΑΰÓñ.
 • àì%Èì†ÙÓ  È ÒÓÓ~ΑίÈΑ "  CLEANING
 CASSETE" ÒÓñ,Ìñ, ÙÓñ% Ù,, Α†% Ù,,ÓíÈÈ
 Èì%Èì†ÙÓ ÌÈ,,†Αΰ Ì† Ì† ÌÀ ÙàÑ ÈÈÈ ,
 ,È%ÔÈÓì†ÙΑíÀ.



If **[a]** or **[b]** happens, clean the video heads with the Sony DVM12CL cleaning cassette (not supplied). Check the picture and if the above problem persists, repeat the cleaning. (Do not repeat cleaning more than 5 times in one session.)

Note

If the DVM12CL cleaning cassette (not supplied) is not available in your area, consult your nearest Sony dealer.

ÒÓÈÈ ÌÓÓ ÒÍÙ~ÈÙÓñ ÒÓÓÓÙÓñÈÈÀ **[a]** ÈÈÈ **[b]**,
 Ó~ÈÓÙÈÙÀ, È%ÔÓ,,ÓÍÓ,ÍÈ Ò ÒÓÍÓ~
 Ó~ÈÓÙÈÙΑí, ÌÓÈ Ì†ÒÒΑΰ~ Sony DVM12CL (ÌÀ
 Ò Èì†,†ΑΰÓñ). èÓÓÍΑÓ Ó,Â ÌÈÈÁÓ· †ÈΑίÈñ,
 ΑòÈÈ ÒÍÓ, ÒΑ Α~Α "Α†~ÙíÀìÓ", ÒÓ, ÙÓ ÈÙΑ
 Ó~ÈÓÙÍÙ. (çÀÓÓ, ÙÓ ñÈÙΑÓ~ÈÓÙÍÙ· ÒíÀÀ5 †Α
 Α†Ó%ÈíÒ ÈΑí.)

è ÈíÀ~†ìÈÀ
 ÒÓÈÈ Ó~ÈÓÙÈÙΑí, ÌÓÈ Ì†ÒÒΑΰ~ DVM12CL (ÌÀ
 Ò Èì†,†ΑΰÓñ) ÌΑΰ, Ò Ó%†ÈÀ, Ç†~ÀÈ Ò~ì†ÓÙÈ,
 Ò ÒÍÓÍÒΰÌ, ÙÈ ÙÈÙΑÓ, Ù Ç†~Α,, Ò~ÌÈÈ†È~Α,, Ò
 %ÈíÀ †Sony.

Maintenance information and precautions

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Precautions

Camcorder operation

- Operate the camcorder on 7.2 V (battery pack) or 8.4 V (AC power adaptor).
- Should any solid object or liquid get inside the casing, unplug the camcorder and have it checked by Sony dealer before operating it any further.
- Avoid rough handling or mechanical shock. Be particularly careful of the lens.
- Keep the POWER switch set to OFF when not using the camcorder.
- Do not wrap up the camcorder and operate it since heat may build up internally.
- Keep the camcorder away from strong magnetic fields or mechanical vibration.

On handling tapes

- Do not insert anything in the small holes on the cassette.
- Do not open the tape protect cover or touch the tape.
- Avoid touching or damaging the terminals. To remove dust, clean the terminals with a soft cloth.

Camcorder care

- When the camcorder is not to be used for a long time, disconnect the power source and remove the tape. Periodically turn on the power, operate the camera and player sections and play back a tape for about 3 minutes.
- Clean the lens with a soft brush to remove dust. If there are fingerprints on the lens, remove them with a soft cloth.
- Clean the camcorder body with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.

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ùìÒÒìÙ±Ù±Èñ ,È%ÀÓì±ìÀ °

- ùìÒÒìÙ±ÙÈ ÙÈÙÀ,È%ÀÓì±ìÀ ÙÓÙ7,2Ç (-±Ù± ÆÈìÒ,Ò-ìÒì±) ÈìÈ 8,4 Ç (ÒÀÙÀ,Ò,,Ò ±%±ÙÒÀ ±ÒÀ ÆìÙÒì±)
- ÒÒìÈ ì±ìÈÒÈ-ìÈ-Ù% Ù,À %È Ò Æ%ìÀÙ ÈìÈ ÈÈ%ìÒÙÙ, ÒÒÒ±ìÈ, ìÒ ÒÙÒ, ÙÒ, ìì-ÈÙÀ,È%ÀÓì±ìÀ ÙÈÒ Ò,À, ÙÀÀÙ%ÈìÀ ±Sony ÒÀ Æ%±ì ìÀÈ-ÀÈ ÆÀ ìÒÒìÙ±Ù±ÈÀÈ.
- àÀ-À,±ÈÙÀ,, Ù-Ò,Ò Ò-±-ÀìÈñ ÈìÈ ìÀì±ìÈ-ÀÒìÈì Ù%± Ò,, ÆÙ% ÙÀ ÒÒÒ-ÀììÒ ÒÙìÒ ÒÈì° Ò Ò-ÀìÙÈ,Òì.
- NÀ ÈÈÙÀ,, ìì-±ÙÀì, POWER ÒÒìÒÈÀìÈÈ OFF, ìÒ,,%±,È%ÀÓì±ìÀ ± ìÀ ÈÒÒÒìÀÙÀÙÒñ.
- çÀ Á±,Ò ±È,±ÈÙÀ,È%ÀÓì±ìÀ Ù È ìÀ ìÒÒìÙ±ÙÈ ÙÈÙÀÀÀ, Ù±ìÒìÒÒÙÒñìÈÈ, Ù±ì ì±ìÒÈÁÙ Ò ÒÈÁÒÈÙÈ, ìÙÙ ÆììÀ ÒÒ, -ÀìÈÀ ÙÀìÒÀ ±ÙÙ °
- NÀ ÈÈÙÀ,È%ÀÓì±ìÀ ÙÒÒ%±ì-ÀÓÙ ÒÈì,ì°, ì±,ìÈÙì°, ÒÒìÀÈ ÈìÈ ìÀì±ìÈ-ÀÒìÒÈ,È-±ÈÈ.

éÙìÒÒÈÈÙÀì ìÒ Ò-±-ÀìÈñ Ò ìÀìÙ±ìÈ

- çÈ-À,,Ò ìÀ, ÙÒ±,ìñÈÙÀ, ì±ìÀì,ìÈÀ ÒÙ,À ÒÙÈñ±±ÒÒÀÙÀ.
- çÀ ÒÙì°,±ÈÙÀ Á±ÈÙìÙ, ì-ìÙ ìÀìÙ° È ìÀÙ Ò,±ÈÙÀìÀìÙÙ.
- àÀ-À,±ÈÙÀ ì±ò±ìÈñ ÈìÈ ÒÒ, ÆÈ%ÀìÈñ ìÒìÙ±ìÙÒ, Nìñ Ù%±ìÀìÈñ Ò°ìÈ ÒÈ-±ÈÙÀ ìÒìÙ±ìÙ° ìñ,,ìÒÈ Ùì±ì,,.

ììÒ% Æ±,È%ÀÓì±ìÀ ÒÈ

- äÒ,,%±,È%ÀÓì±ìÀ ±ìÀ ÈÒÒÒì ÀÙÀÙÒñ, ÙÀ-ÀìÈÀ%ìÈÙÀì ìÒ,Ò, ÀìÀìÈ, ÒÙÒÒÀ%ÈìÈÙÀ ÈÒÙÒìÈìÒÈÙ±ìÈñ È Ù%±ìÈÙÀìÀìÙÙ, èÀ ÈÒ%È-ÀÒìÈ, ìì-±ÈÙÀ ÒÈÙ±ìÈÀ, ±-ÒÙ±ÈÙÀ Ò ÒÀìÈñÈ ì±ìÀ ° È ÒìÀÈÀ ± È,ÒÒÒ ÒÈÀ,Ò%ÈÙÀìÀìÙÙÒ È-ìÈÀÈÙÀì,ìÒ, ÙÀ-ÀìÈÀ 3-ì ìÈìÙÙ.
- éÈ-±ÈÙÀ Ò-ÀìÙÈ, ò ÒÒìÒ° ìñ,,ìÒÈ ìÈÒÙÒìÈ %ñ Ù%±ìÀìÈñ,, ñÀÈ. ÒÒìÈ ÈìÀ, ÙÒñ ÒÙÒÀ-±ÙìÈ Ò±ì,À, ì± Ò-ÀìÙÈ,À, ÙÒ Ù%±ìÈÙÀ Èì Ò ÒÒìÒ° ìñ,,ìÒÈ Ùì±ìÈ.
- éÈ-±ÈÙÀ ìÒ ÒÙÒ ±ÒÒ± ±Ù± Ò ÒÒìÒ° ÒÙìÒÈ ìñ,,ìÒÈ Ùì±ìÈ ÈìÈ ìñ,,ìÒÈ Ùì±ìÈ, ÒìÀì,± ÒìÒ-ÀììÒÈ ±ÒÙ,Ò Òì ÙìÀ ÆììÒ,Ò ìÒ-À,,Ò Ò Æ%ÒÙ,±, çÀ ÈÒÒÒì,ÀÈÙÀ ì±ìÈ-ìÈ-ÒÙÈÒÒ, ±ÒÙ,Ò ÈÙÀìÀÈ, ìÒÙÒ °ÀìÒ,,ÙÙ ÒÒ, Æ%ÈÙ,ÒÙ%ÀììÙ.

AC power adaptor

Charging

- Use only a lithium ion type battery pack NP-F100/NP-F200.
- Place the battery pack on a flat surface without vibration during charging.
- The battery pack will get hot during charging. This is normal.

Others

- Unplug the unit from the mains when not in use for a long time. To disconnect the power cord, pull it out by the plug. Never pull the cord itself.
- Do not operate the unit with a damaged cord or if the unit has been dropped or damaged.
- Do not bend the AC power cord forcibly, or put a heavy object on it. This will damage the cord and may cause a fire or an electrical shock.
- Be sure that nothing metallic comes into contact with the metal parts of the connecting plate. If this happens, a short may occur and the unit may be damaged.
- Always keep the metal contacts clean.
- Do not disassemble the unit.
- Do not apply mechanical shock or drop the unit.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment because it will disturb AM reception and video operation.
- The unit becomes warm while in use. This is normal.
- Do not place the unit in locations that are:
 - Extremely hot or cold
 - Dusty or dirty
 - Very humid
 - Vibrating

If any difficulty should arise, unplug the unit and contact your nearest Sony dealer.

εÚΑ,ΟÊεÊεÊΑ ΟÁ ΑÌ.ύÒηÊ

- αÔοÒί,άÚεÚά ύÒί,ί .ηÚηÊ ΑÊεÊ .ίÒί NP-F100/NP-F200ίÊεÚά,οÊεÒί,οÚεÔεÊ.
- εÊηÁαÒύÊά .ηÚηÊ ΑÊεÊ .ίÒί ηÊ οÎοÒίÔεÊ οÔ,άÌ οÎοÚεÊ .άÁ,εÊ .ηÊεÊ,οÊ, ΑÌηÊ ΑÊηÊοÊεÊ.
- ΑÊηÚηÊ ΑÊεÊ .ίÒί .ύÒηÊάÚ ηÊ, ΑÊηÚοÊηÊ,οÊ, ΑÌηÊ ΑÊηÊοÊεÊ. ύÒοÊ ηÊ,ί&ηÁύÔηÊ ίÒ ηÊηÊ,ίÊ.

εÊοÊάÁ

- εÚοÔάÔεÌεÚάÊοÊεÊ ηÊύÒοÌάÌύÊ εÊάÔίÔεÊ οÁύÊ,άÔίÊ οÌίÁεÔοÔί,άÚάÛο&ηÊοÌεÚάÌ,ίÔάÊ, ΑÌηÊ.ΝÌηÊοÛοÔάÔεÌί&ηÊοÁύÊ,οÔ,οÔοÊ,οÔεÔεÊ .ηÚηÊεÚάÁ,οÁ ηÊ ηÊάÌ. εÊεÎοÊ,ηÊηÊ ίÁηÊίÊύÊάÊηÊοÊεÊοÊ.
- εÁίÔοÌύÊηÊεÚεÚάÊοÊεÊ ηÊύÒοÌάÌύÊ οÔ, ΑÊηÊοÌίÊοÊ,οÔ,εÊεÊ ΑÔίÊεÊ ηÊόÊεÊ .ίÊ οÔ, ΑÊηÊοÌίÊ.
- εÁοÊ,εÊηÊεÚάÔάÚ,οÊεÔοÊοÊεÌοÊεÌεÌάÊοÚηÊ,ύÁ ηÊηÊ,οÊ ύ&ηÊεÁηÊάÊ οÁηÊίÁ . ύÒοÊοÊ, ΑÊηÊεÚοÊ,οÊ,εÌοÊεÁύÔεÁοÚεÌοÊεÊ ηÊεÌεÊ ύÔεÊ ηÊηÊάÌύÊ εÊάÔίÊύÔίÔ.
- ιÁηÊεÚάÔ, ηÊύÔ ηÊεÌεÌάÊ ηÊάÚηÊεÊάÔίÊεÁ οÁηÊίÁ .ίÁοÔοÊεÌοÊεÊ ηÊοÊήÊοÊ ύÔηÊοÊήÊάÔίÊεÌεÊ ηÊόÛηÊεÌεÊ οÔάÔεÌεÚάÌ,ίÔεÊοÌήÊεÌεÊ .οÔίÊ ηÊύÔοÌηÊεÚο&ηÊ,ίÔεÁύÔοÊεÁοÚεÌοÊοÌάÁηÊηÊεÁ,εÊηÊοÊεÊ ηÊηÊεÁύÔ,οÔ, ΑÊηÊοÌίÊ.
- εÔάÊ,ηÊηÊοÊεÊοÊάÊ εÊεÊηÊεÚάÌηÊεÊάÔίÊεÁ ίÔίÚηÊηÊ,εÊοÚοÚάÊ.
- εÁηÊεÊεÊηÊεÚάÊηÊοÊεÊ ηÊ.
- εÁοÔεÔ,άÊηÊεÚάÊηÊοÊεÊ ηÊύ&ηÊηÊεÊάÔίÊεÁ .εÊ .ηÊεÊεÊ ίÁ οÌηÊεÚάÁ,οÊ.
- αÔ,ηÊηÊοÊεÊηÊεÚεÔοÌάÚάÛο&ηÊ,οÔοÊ.άÌοÌοÊ, ΑÌηÊΑÊηÊοÌίÊ,ηÊάÊεÚάÁ,οÔοÊηÊηÊ,άÔύÊηÊεÔοÊεÁίÊεÌοÊ,άÁεÊ,εÊηÊάÔηÊοÊεÊ ηÊύÔ,οÔοÌοÌύÔοÌ .ύÔηÊάÚ ηÊ ηÊηÊ,οÊεÁηÊεÊηÊοÚεÊηÊηÊάÔηÊοÊεÊ ηÊύÔ .
- ΑÔοÊεÊ ηÊόÛηÊεÚο&ηÊ ύÁοÌηÊ,οÊ, ΑÌηÊ ΑÊηÊοÌίÊ. ύÔοÊήÊεÊεÚο&ηÊ ίÔ ηÊηÊ,ίÊ.
- εÁ ηÊάÌηÊεÚάÊηÊοÊεÊ ηÊ,ίÁοÚηÊ,ίÔύÔοÊάÊ .οÁάÌάÌ ίÔ,οÊηÊεÁεÌεÊ ίÔίÔηÊοÌάÊ .
- εÊίÊηÊάÊεÌεÊ,ηÊάÌηÊάÊ
- εÊάÌ,ηÊηÊεÌηÊάÊ
- εÔηÊ,άÊεÁηÊ,εÊ.ηÊεÊ

εÊοÌηÊηÊάÊ,οÁίÊεÌοÊ,άÌε&ηÊ ηÊηÊεÌεÊ.ίÊ.οÊ ύÔηÊοÛάÊ,οÛηÊεÚάÊηÊοÊεÊηÊεÔεÊ .ηÊεÚάÔ, ίÊεÊηÊεÊηÊάÌύÊ ηÊεÌεÊηÊάÌύÊ Sony.

Trouble check

If you run into any problem using the camcorder, use the following table to troubleshoot the problem. Should the difficulty persist, disconnect the power source and contact your Sony dealer or local authorized Sony service facility.

Camcorder

Power

Symptom	Cause and/or corrective actions
The power is not on.	<ul style="list-style-type: none"> The battery pack is not installed. → Install the battery pack. (p. 10) The battery is dead. → Use a charged battery pack. (p. 7) The AC power adaptor is not connected to mains. → Connect the AC power adaptor to mains. (p. 25) If the power is still not on after you tried the corrective actions above, press the RESET button on the back of the cassette compartment lid using a sharp-pointed object. (If you press the RESET button, all the settings including the date and time return to the default.) (p. 82)
The power goes off.	<ul style="list-style-type: none"> While being operated in CAMERA mode, the camcorder has been in Standby mode for more than 5 minutes. → Set the POWER switch to OFF, then to CAMERA. (p. 13) The battery is dead. → Use a charged battery pack. (p. 7)
The battery pack is quickly discharged.	<ul style="list-style-type: none"> The ambient temperature is too low. (p. 62) The battery pack has not been charged fully. → Charge the battery pack again. (p. 7) The battery pack is completely dead, and cannot be recharged. → Use another battery pack. (p. 25)
The battery pack cannot be installed.	<ul style="list-style-type: none"> Only an NP-F100/NP-F200 battery pack can be used.

Operation

Symptom	Cause and/or corrective actions
START/STOP does not operate.	<ul style="list-style-type: none"> The tape is stuck to the drum. → Eject the tape. (p. 11) The tape has run out. → Rewind the tape or use a new one. (p. 21) The POWER switch is set to PLAYER. → Set it to CAMERA. (p. 12) The tab on the cassette is out (red). → Use a new tape or slide the tab. (p. 11)
The cassette cannot be removed from the holder.	<ul style="list-style-type: none"> The battery is dead. → Use a charged battery pack or the AC power adaptor. (p. 7, 25)
and indicators flash and no function except for cassette ejection works.	<ul style="list-style-type: none"> Moisture condensation has occurred. → Remove the cassette and leave the camcorder for at least 1 hour. (p. 66)
"CLOCK SET" appears when the camcorder is turned on.	<ul style="list-style-type: none"> Reset the date and time. (p. 58)

Continued to the next page

Trouble check

Operation

Symptom	Cause and/or corrective actions
The End Search function does not activate.	<ul style="list-style-type: none"> The cassette was ejected after you recorded on it. → The End Search function will not activate until you make a new recording after reinserting the cassette.
The tape does not move when a tape transport button is pressed.	<ul style="list-style-type: none"> The POWER switch is set to CAMERA or OFF. → Set it to PLAYER. (p. 21) The tape has run out. → Rewind the tape or use a new one. (p. 21)
No sound or only a low sound is heard when playing back a tape.	<ul style="list-style-type: none"> The volume is turned to the minimum. → Open the LCD panel and press VOLUME +. (p. 21)
The SteadyShot function does not activate.	<ul style="list-style-type: none"> S SHOT is set to OFF in the menu system. → Set it to ON. (p. 38)
Recording stops at once.	<ul style="list-style-type: none"> The POWER switch is set to PHOTO. → Set it to CAMERA.
Recording stops in a few seconds.	<ul style="list-style-type: none"> The START/STOP MODE switch is set to 5SEC or ⏏. → Set it to ⏏. (p. 18)
The autofocus function does not activate.	<ul style="list-style-type: none"> Focus is set to the manual mode. → Set it to autofocus. (p. 43) Shooting conditions are not suitable for autofocus. → Set focus to manual mode to focus manually. (p. 43)
The fader function does not work.	<ul style="list-style-type: none"> The START/STOP MODE switch is set to 5SEC or ⏏. → Set it to ⏏. (p. 18)

Picture

Symptom	Cause and/or corrective actions
The image on the viewfinder screen is not clear.	<ul style="list-style-type: none"> The viewfinder lens is not adjusted. → Adjust the viewfinder lens. (p. 13)
A vertical band appears when a subject such as lights or a candle flame is shot against a dark background.	<ul style="list-style-type: none"> The contrast between the subject and background is too high. The camcorder is not malfunctioning. → Change locations.
The picture is "noisy" or does not appear.	<ul style="list-style-type: none"> The video heads may be dirty. → Clean the heads using the Sony DVM12CL (not supplied) cleaning cassette. (p. 67)
⊗ indicator flashes on the LCD screen or in the viewfinder.	<ul style="list-style-type: none"> The video heads may be dirty. → Clean the heads using the Sony DVM12CL (not supplied) cleaning cassette. (p. 67)
The picture is too bright or too dark.	<ul style="list-style-type: none"> LCD BRIGHT is not adjusted properly. → Press + or - to obtain the brightness you want. (p. 16)
A vertical band appears when shooting a very bright subject.	<ul style="list-style-type: none"> The camcorder is not malfunctioning.
The picture does not appear in the viewfinder.	<ul style="list-style-type: none"> The LCD panel is open. → Close the LCD panel.
The picture does not appear on the LCD screen or in the viewfinder.	<ul style="list-style-type: none"> Incorporated fluorescent tube is worn out. → Please contact your nearest Sony dealer.

Picture

Symptom	Cause and/or corrective actions
While editing using the DV connecting cable, recording picture cannot be monitored.	<ul style="list-style-type: none"> Remove the DV connecting cable, and connect it again.

Others

Symptom	Cause and/or corrective actions
The camcorder becomes warm.	<ul style="list-style-type: none"> If the power of the camcorder is on for a long time, it becomes warm, which is not malfunction.
The supplied Remote Commander does not work.	<ul style="list-style-type: none"> COMMANDER is set to OFF in the menu system. <ul style="list-style-type: none"> → Set it to VTR4 or ID. (p. 86) Something is blocking the infrared rays. <ul style="list-style-type: none"> → Remove the obstacle. The battery is not inserted with the correct polarity. <ul style="list-style-type: none"> → Insert the battery with the correct polarity. (p. 86) The batteries are dead. <ul style="list-style-type: none"> → Insert new ones. (p. 86)
The CHARGE lamp flashes after you charge the battery pack installed in the camcorder.	<ul style="list-style-type: none"> The camcorder is not malfunctioning.
No function works though the power is on.	<ul style="list-style-type: none"> Disconnect the connection plug on the battery pack or on the AC power adaptor, then reconnect it in about 1 minute. Turn the power on. If the functions still do not work, press the RESET button on the back of the cassette compartment lid using a sharp-pointed object. (If you press the RESET button, all the settings including the date and time return to the default.) (p. 82)

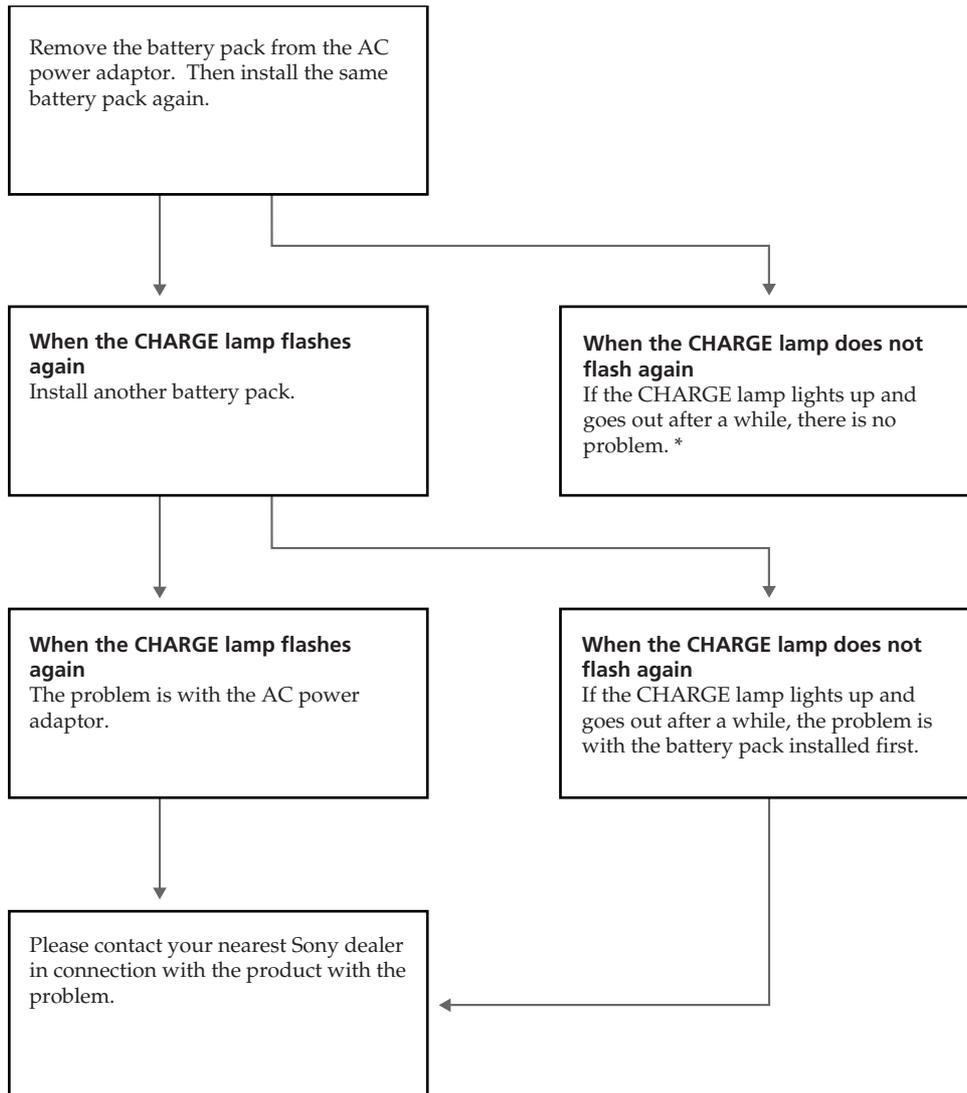
AC power adaptor

Symptom	Corrective actions
The VTR/CAMERA or CHARGE lamp does not light.	<ul style="list-style-type: none"> Disconnect the mains lead. After about 1 minute, reconnect the mains lead. (p. 7)
The CHARGE lamp flashes.	<ul style="list-style-type: none"> See the chart on the next page.

Trouble check

When the CHARGE lamp flashes

Check through the following chart.



* If you use a battery pack which you have just bought or which has been left unused for a long time, the CHARGE lamp may flash at the first charging. This does not indicate a problem. Repeat again to charge with same battery pack.

àÁÓ. †ÊÀÏË

è ÊÀÏ†	è Ê~È† Ê/ËÏ %ÁÈÓÚ,Ëñ ÒÓ ÈÒÓ †,ÏÀÏË
àÏ%Ë†ÚÓ ⊗ ÏË,,†ÁÚ ì† †ìÀ ÙàÑ ÈÏË ,Ë%ÓËÓ†ÚÁÏÀ.	<ul style="list-style-type: none"> • ÇÓÁÏÓËÏÓ Á†, ñÁÏÀ†, Ë%ÁÓ,ÓÏÓ,ÏË. → ε~ÈÓÚËÚÁ,Ë%ÁÓ,ÓÏÓ,ÏË Ò ÈÒÓÓÏ,ÁÓ,†ÏËÁÏ Ò~ÈÓÚËÚÁÏ,ÏË ì†ÓÓÁÚ* Sony DVM12CL (ÏÀ Ò ÈÏ†,†ÁÚÓñ).(ÓÚ .67)
àÁÓ. †ÊÀÏËÁ ÒÏË~ÏÏ† ÙÁÏÏÓÁ.	<ul style="list-style-type: none"> • òÏÏÏ~Ëñ LCD BRIGHT ÓÚ Á,,ÓÏË Ó,†ì† ÏÁÓ †,ËÏ,ÏÏ. → ç†ËÏËÚÁ + ÈÏË - %ñ ÒÓÏÏ~ÁÏËñ ÈÁÏ†ÁÏË ñ ÏÓÓËË.(ÓÚ .16)
ÇÁ ÙËÏ†† ì†ñ ÒÓÏÓÓ†ÓÓñ,ÏñÁÚÓñ Ò È Ò~ÁÏ†Á Ò~ÁÏ, ñ ÏÓ,,Ó Ò~ÁÏ†.	<ul style="list-style-type: none"> • ÇË%ÁÓ††Á † ÏÁ ñ,ÏñÁÚÓñ ÏÁËËÓÓ †,ÏËË.
àÁÓ. †ÊÀÏËÁ ÏÁ ÒÓñ,ÏñÁÚÓñ ,Ë%ÓËÓ†ÚÁÏÀ.	<ul style="list-style-type: none"> • éÚÏ †Ú Ò†ÏÁÏ, ÙàÑ. → á† ÒËÚÁ Ò†ÏÁÏ, ÙàÑ.
àÁÓ. †ÊÀÏËÁ ÏÁ ÒÓñ,ÏñÁÚÓñ ì† †ìÀ ÙàÑ.	<ul style="list-style-type: none"> • ÇÓÚ ÓÁÏ†† Ï ÏËÏÁÓ~ÁÏÏ†† Ï†ÏÓ†, °†† ÈÁ ÓÚ Óñ. → ε,ñËËÚÁÓ, Ò Ç† ÈÏ ÏËË†È~ÈÏ %ËÏÁ ÒÏ Sony.
ÇÓ , ÁÏñ ÏÏÏ†† Ò ÈÒÓÓÏ,ÁÓ,†ÏËÁÏ ÓÓÁ%ËÏËÚÁÏ,Ï,Ó ÈÚ Ò,Ó,Ï,Ë%ÁÓ†.ÁÏñ ÏÁ,ÓÁÏËÏÓ Ò ÓÏ††Ú È,†Ú Á†ÓËÓ,†ÁÏÓÁ ÈÁÓ. †ÊÀÏËÁ.	<ul style="list-style-type: none"> • éÚÓÓÁ%ËÏËÚÁÓÓÁ%ËÏËÚÁÏ ÏÈ~ÈÚ ÓÓË ,Ë%ÁÓ†.ÁÏ, È ÓÓ%ÓÓÁ%ËÏËÚÁÁ,,ÓÏÓ,†.

è Ó~Á

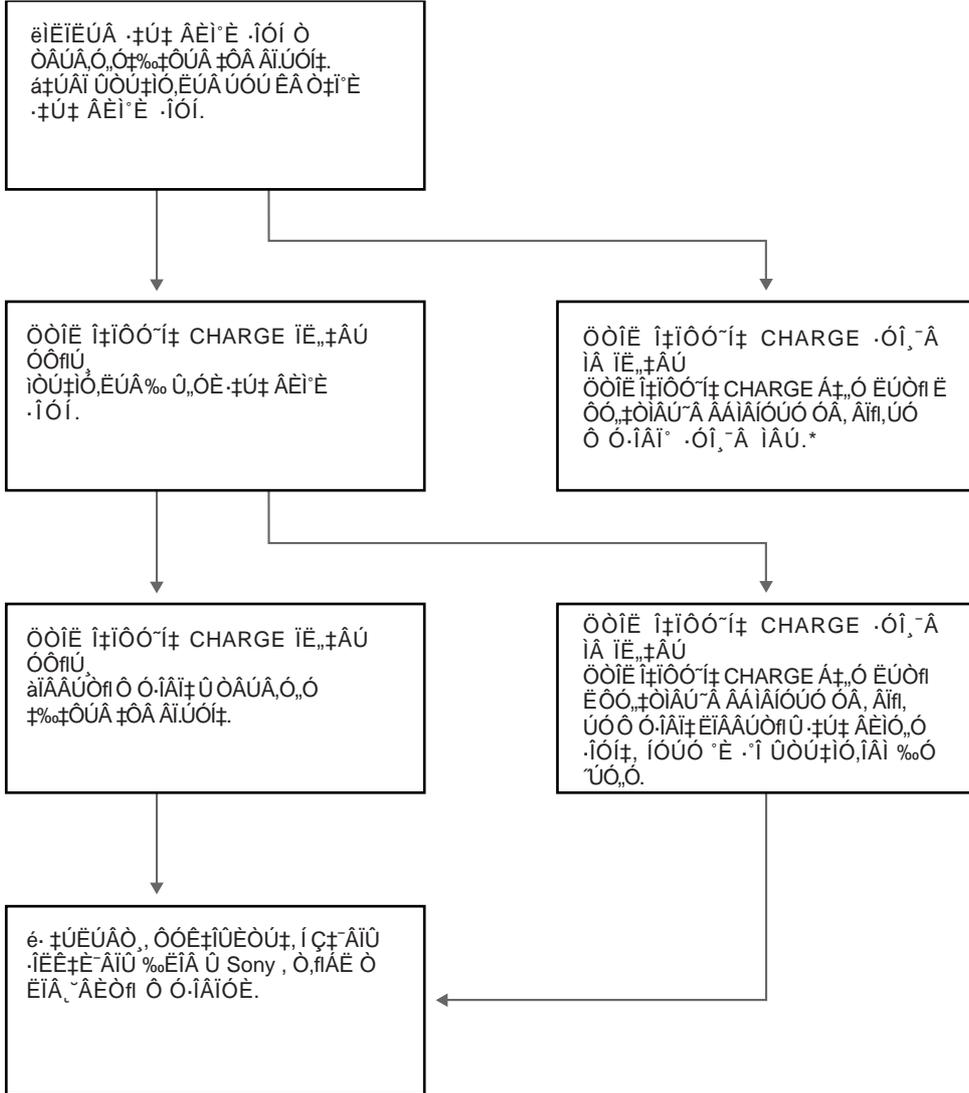
è ÊÀÏ†	è Ê~È† Ê/ËÏ %ÁÈÓÚ,Ëñ ÒÓ ÈÒÓ †,ÏÀÏË
ÇË%ÁÓ††Á †ÓÚ†ÏÓ,ËÚÓñÚÁÓÏËË.	<ul style="list-style-type: none"> • ÒÓÏË ÒËÚ†ÏËÁ ,Ë%ÁÏ††Á °. ÏÓ ÏÏ~ÁÏÓ , ÙÁ~ÁÏËÁ %ÏËÚÁÏ,Ï,ÓÓÁ ÈÓ%†, ÁÏÁËËÓ††ÓÚ†ÏÓ,ËÚÓñÚÁÓÏËË, ÏÓ ÏÓ ÏÁ ñ,ÏñÁÚÓñ ÏÁËËÓÓ †,ÏÓÓ,,.
ÇÁ †.ÓÚ†ÁÚ Ò ÈÏ†,†ÁÏË ÒÓÏÏ, Ù %ËÓÚ††ÈÏÏÏ,,ÓÓÓ, ÏÁÏñ.	<ul style="list-style-type: none"> • òÏÏÏ~Ëñ COMMANDER ÙÓÚ†ÏÓ,ÏÁÏ† ì† OFF , ÒËÓÚÁÏÁ ÏÁÏ. → ÏÓÚ†ÏÓ,ËÚÁ ÁÁ ì† VTR4 ÈÏË ID. (ÓÚ . 86) • óÚÓ~ÚÓ Á†† †.ÁÚ ÓÓÚ, ÈÏÚ †† ðÏ†† ÏÏ~ÁË. → Ï%†ËËÚÁÓ ÁÓñÚÓÚ,ËÁ. • Á†Ú† ÁËÏ†, ÓÚ†,ÏÁÏ† Ò ÏÁÓ †,ËÏ,ÏËË ÒÓÏñ ÏÓÓÚ,,. → ÇÓÚ†, ÙÁ. †Ú† ÁËÏÏ Ò Ò †,ËÏ,ÏËË ÒÓÏñ ÏÓÓÚ,,.(ÓÚ . 86) • Á†Ú† ÁËÏË ÒÓÏÏÓÓÚ, †Á ñËÁÏ†. → ÇÓÚ†, ÙÁ ÏÓ,°Á. †Ú† ÁËÏË. (ÓÚ . 86)
ã†ÏÓÓ††† CHARGE ÏË,†ÁÚ ÓÓÏÏÁ Á† ñ%ÏË. †Ú†. ÁËÏÓ,Ó. ÏÏ††, ÙÓÓ†ÏÓ,ÏÁÏÏ,Ó , Ë%ÁÓ††Á Á.	<ul style="list-style-type: none"> • ÇË%ÁÓ††Á † ÏÁ ñ,ÏñÁÚÓñ ÏÁËËÓÓ †,ÏËË.
çËÏ†ËÁ ÙÓÏÏ~ËË ÏÁ †.ÓÚ†.Ú, ÏÁÏÏÏ ñ†ÚÓ, ÙÓÓËÚ†ËÁ , ÏÏ~ÁÏÓ.	<ul style="list-style-type: none"> • éÚÏÏ~ËÚÁ ÓÓÁ%ËÏËÚÁÏ ÏÈ †.ÁÏ. †Ú† ÁËÏÓ,Ó ÏÏ†† ÈÏË ÓÁÚÁ,Ó,Ó †%†ÓÚÁ † ÓÁ ÁÏ. ÙÓÏ†, †.Á†ÚÁÏ ÓÓ%ÏÏ. ÈÚÁ Á,Ó ÒÏÓ,† Ò È.ÏËÁËÚÁÏ ÏÓ~Á ÁÁ ÏÈÏÏÏÏ. ÇÏÏ ÈÚÁ ÒËÚ†ËÁ. ÓÓÏË ÙÓÏÏ~ËË, ÓÁ Á~Á ÏÁ †.ÓÚ†.Ú, ÏÈËËÚÁ ÏÏÓÏÏ RESET ì† Á†%ÏÏÁË ÓÓÓ ÒÏÁ Ï~ÏË ì†ÓÓÁÏÏ,Ó ÓÓÓÁ† Ò ÈÒÓÓÏ,ÁÓ,†ÏËÁÏ Á†ÓÓÚ ÁÏÏ,Ó Ò Á%ÏÏÁÚ†. (ÓÏÏË Ç† ÏÈËË†ÁÚÁ ÏÏÓÓÏ RESET, °Á ÙÓÓ†ÏÓ,ÏË, ÏÏ~Ïñ %†ÚÚ È , ÁÏñ, ÓÁ, †† ÙÓñ,ÈÏÓ%ÏÏÁ ÓÓÓÓñÏËÁ.) (ÓÚ . 82)

èÁÚÁ,ÓË†%†ÓÚÁ ÓÁ ÁÏ.ÚÓ††

è ÊÀÏ†	ÑÁÈÓÚ,Ëñ ÒÓ ÈÒÓ †,ÏÀÏË
ã†ÏÓÓ††† VTR/CAMERA ÈÏË CHARGE ÏÁ,Ó ÈÚ.	<ul style="list-style-type: none"> • éÚÓÓÁ%ËÏËÚÁÓÓÁ,ÓËË Ó,Ó%è È.ÏËÁËÚÁÏ ÏÓ~Á ÁÁ ÏÈÏÏÏÏÏÏ,†ÓÓ%ÓÓÁ%ËÏËÚÁÓÓÁ,ÓËË Ó,Ó%.(ÓÚ .7)
ã†ÏÓÓ††† CHARGE ÏË,†ÁÚ.	<ul style="list-style-type: none"> • èÏÓÚ ÈÚÁ òÏÁÏÏ ì† òÏÁ%Ú.~ÁË ÒÚ †Ï~Á.

è Ó,Á ì† ÌÄÈÒÒ †,ÌÓÒÚÄÈ

äÓ,,%† ÌÈ,,†ÁÚ Ì†ÌÓÓ~í† CHARGE
è Ó,Á ,ÚÄ ÓÓ òíÄ%ú.~ÄÈ òíÄÌÄ.



* ÒÒÌÈ Ç° ÈÒÓÓÌ,ÁÚÄÚÄ .†Ú† ÄÈìÈ .ÌÓÍ, ÌÓÚÓ °È Ç° ÚÓì,ÌÓ ~ÚÓ ÌÙÒÈÌÈ, ÈÌÈ ÌÓÚÓ °È .ì ÓÓÚ†,ÌÄÌ Ì†
%ÈÚÄÌ,ÌÓÄ, Äñ .ÄÄ ÈÒÓÓÌ,ÁÓ,†ÌÈñ, ÚÓ Ì†ÌÓÓ~í† CHARGE ÌÓÈÄÚ ÌÈ,,†Ú, Ò È ÓÄ ,ÓÈ Ä† ñ%òíÄ. ùÚÓ ÌÄ
Úì†Ä°,†ÁÚ Ì† Ì†ÈÈ-ÈÄ Ò Ó.ÌÄÌ°. èìÓ,† ÓÓ,ÚÓ ÈÚÄ Ä† ñ%òíÙ Ò ÚÄÌ ÈÄ Ò†ìì .†Ú† ÄÈìì .ÌÓÍÓÌ.

English

Specifications

Video camera recorder

System

Video recording system

Two rotary heads, Helical scanning system

Audio recording system

Rotary heads, PCM system

Video signal

PAL colour, CCIR standards

Usable cassette

Mini DV cassette with logo printed

Tape speed

SP: Approx. 18.83 mm/s

LP: Approx. 12.57 mm/s

Recording/playback time

SP mode: 1 hour (DVM60)

LP mode: 1.5 hours (DVM60)

Fastforward/rewind time

Approx. 2 min. 30 s (DVM60) (using with battery pack)

Approx. 1 min. 45 s (DVM60) (using with AC power adaptor)

Image device

CCD (Charge Coupled Device 1/3")

Viewfinder

Electric viewfinder (colour)

Lens

Combined power zoom lens, 20x (Digital), 10x (Optical)

Focal distance

f = 4.0 to 40 mm

38 to 380 mm when converted into a 35 mm still camera)

F 1.8 – 2.6

TTL autofocus system inner focus wide macro system

Colour temperature

Auto

Minimum illumination

3 lux at F 1.8

Illumination range

3 to 100,000 lux

Recommended illumination

More than 100 lux

LCD screen

Picture

2.5 inches measured diagonally

50.05 x 37.1 mm

On-screen display

TN LCD/TFT active matrix method

Total dot number

84,480 (384 x 220)

Input and output connectors

S video output

4-pin mini DIN

Luminance signal: 1 Vp-p, 75 Ω,

unbalanced, sync negative

Chrominance signal: 0.3 Vp-p, 75 Ω, unbalanced

Audio/Video output/Headphones jack

Special minijack, 1 Vp-p, 75 Ω, unbalanced, sync negative

327 mV, (at output impedance more than 47 kΩ)

Output impedance with less than 2.2 kΩ/Stereo minijack (ø 3.5 mm)

DV output

4-pin special connector

Speaker

Piezo-electric-speaker

Connection

26-pin connector

General

Power requirements

7.2 V (battery insertion input)

8.4 V (26-pin connector)

Average power consumption

5.0 W during camera recording using viewfinder

6.0 W during camera recording using LCD screen

Operating temperature

0°C to 40°C (32°F to 104°F)

Storage temperature

-20°C to 60°C (-4°F to 140°F)

Dimensions

Approx. 59 x 129 x 118 mm (w/h/d)

Mass

Approx. 500 g excluding the battery pack, lithium battery and cassette

Approx. 620 g including the battery pack NP-F100, lithium battery and cassette DVM60

Microphone

Electret condenser microphone, Stereo type

Supplied accessories

See page 6.

AC power adaptor

Power requirements

100 to 240 V AC, 50/60 Hz

Power consumption

25 W

Output voltage

DC OUT: 8.4 V, 1.8 A in operating mode

Battery charge terminal: 8.4 V, 1.4 A in charge mode

Application

Sony battery pack NP-F100, NP-F200 lithium ion type

Operating temperature

0°C to 40°C (32°F to 104°F)

Storage temperature

-20°C to 60°C (-4°F to 140°F)

Dimensions (Approx.)

57 x 44 x 107 mm (w/h/d)

Mass (Approx.)

190 g

Design and specifications are subject to change without notice.

Additional Information / NOODIEUAI j#i EUÓ I+*E#i

ēūōōīēē

īāīē~āōīēā ī± ±īúā ēōúēīē

ÇĖ%ĀÓÍ±ĪĀ ±

ēēōūāī±
 ēēōūāī±,Ė%ĀÓĀ±ōēōē
 N,Ā , ±±, ēĀōñ ,ōīō,īē,
 ōēōūāī± ī±īōīōē
 īāīē~āōīēē ±ĀĀ ūīē
 ēēōūāī±ū%ēōā±ōēōē
 Ç ±±, ēĀōñ ,ōīō,īē, ōēōūāī±
 ā ā ā
 ÇĖ%ĀÓōē,ī±
 ñ,ĀŪō,ōēōē,ī±PAL, ōū±l%± Ū
 CCIR
 āōōōī,ĀŪĀĪĀ ±±ōōĀŪ
 ā±ōōĀŪ mini DV Ō
 ī±ōĀĪŪ±īī ūē īāīēĪ
 Āī±īōī
 ēīō ōōū, īāīŪ
 ēĀēēī SP: Ō ē.īēĀ. 18,83 īī/ō
 ēĀēēī LP: Ō ē.īēĀ. 12,57 īī/ō
 Ç ĀīñĀ±ōēōē/
 Ōōō ōēĀĀ%Āīēñ
 ēĀēēī SP: 1 ±ō (DVM 60)
 ēĀēēī LP: 1,5 ±ō± (DVM 60)
 Ç Āīñ ūōīō Āīōē ōĀ Āīōūīē
 ,ŌĀĀ%ī±±%
 ē ē.īēĀ. 2 īēī. 30 Ō (DVM 60)
 (Ō ēēōōōī,Āō,īēēē ±Ū± Āēīō,Ō
 .īōī±)
 ē ē.īēĀ 1 īēī. 45 Ō. (DVM 60)
 (Ō ēēōōōī,Āō,īēēēōĀŪĀ,Ō
 ±%±ōŪĀ±)
 īō īē Ō, ±ŪĀī, ēĀō. ±ēĀīēñ
 CCD(ē ē.ō ōĀ±ñ%ō,ōē
 Ō,ñĀ,)
 ÇĖ%ōēōī±ŪĀī,
 ñ,ĀŪīōē īāīŪ ē~āōīēē
 ,ē%ōēōī±ŪĀī,
 ē.ĀīŪē,
 āōī.ēīē Ō,īīē Ō.ĀīŪē, Ō
 Ō ē,Ō%ol'īŪ ±īōūōī±Ūō Ōī,
 20ī ('ēŪ Ō,ōē), 10ī (ōōŪē~āōīēē)
 īōīŪōīōĀ ±ōōūōñēĀ
 f = 4,0 - 40 īī
 (38 - 380 īī Ō ē Ō Āō. ±Āō,īēēē
 , 35 īī ūōōō-ī±%)
 F = 1,8 - 2,6
 ōē Ōīññī ±īōēōūāī±
 ,īŪŪ ĀīñĀē ūōīŪōē Ōīē Ō
 Ōēōūāīōēē±Ūōī±Ūē~āōīōē
 ūōīŪōē Ō,īē~ĀĀ Ō.ĀīŪē,
 ñ,ĀŪō,ññ ūĀīōĀ ±ŪŪ ±
 Ā,ŪōĀ,Ūīē Ō,īēĀ
 āēīēī±ī, ī±ñ Ōō,Ā~Āīīōōū,
 3 īī Ō ē F = 1,8
 Nē±ō±Āōī Ōō,Ā~Āīīōōūē
 ēŪ 3 īī %ō 100 000 īī
 ēĀīōīĀī%ŪĀī±ñ Ōō,Ā~Āīīōōū,
 ĀōīĀĀ 100 īī

ūī ±ī Ūāñ
 āĀō. ±ēĀīēĀ
 2,5 %,ēī± Ōō %ē±,ōī±ē
 50,05 × 37,1 īī
 āīŪō ī±ēōīīē 'ī ±ī
 ĀīŪē,īō-īŪŪ ē'ī±ñ ŪĀīōīō,,ēñ
 TN LCD/TFT (Ūāñ/
 ūōīōīōīāīō'īē ūīāēōūō)
 ē.ĀĀ ēōīō ~ĀīĀīĀīŪō,
 ēĀō. ±ēĀīēñ
 84 480 (384 × 220)

Çīō%ō'Ā ē ,īō%ō'Ā
 ,īĀĀ%±
 Ç'īō% S-,ē%Āōōē,ī±±
 4-Ū',īō,ōĀ īēīē,īĀĀ%ō Ōō
 DIN
 ēē,īññ īōōŪē: 1 Çōō%,ōēīōē
 ±īōīēŪŪ%Ā, 75 ēī,
 īĀōēīĀ ē'īē, Ō
 ŌŪ ē~±ŪĀī,īōēōēī, ōīēĀ±ēĀē
 ēē,ī±',ĀŪīōōŪē: 0,3 Çōō
 %,ōēīōē ±īōīēŪŪ%Ā, 75 ēī,
 īĀōēīĀŪ ē'īē
 Ç'īō% ±Ū%ēō/,ē%Āō',ōīō,ī'
 ŪĀĀŪōīō,
 ēōĀ'ē±,īōĀ īēīē,īĀĀ%ō, 1 Çōō
 %,ōēīōē ±īōīēŪŪ%Ā, 75 ēī,
 īĀōēīĀŪ ē'īōĀ, Ō
 ŌŪ ē~±ŪĀī,īōēōēī, ōīēĀ±ēĀē
 327 īÇ, (Ō ē ,īō%ō'īōī Ōōīīōī
 Ōōō ŌŪē,īĀīēē .ōīĀĀ 47 īēī)
 Ç'īō%īōĀōōīīōĀōōō ŌŪē,īĀīēĀ
 īĀīĀĀ 2,2 īēī/
 ŌŪĀ ĀōŪōīē~āōīōĀīēīē,īĀĀ%ō(Ō
 3,5 īī)
 ñēŪ Ō,ōē ,ē%Āō',īō%
 4-Ū',īō,ōĀ ŌĀē~ēī,īōĀ
 ,īĀĀ%ō
 ē Ōīō,Ō,Ō ēŪĀī,
 ē,ĀĀō īāīŪ ē~āōīēē
 ,,ōīīō,Ō,Ō ēŪĀī,
 ēōĀ%ēīĀīēĀ
 26-Ū',īō, ē ŌōĀ%ēīēŪĀī,

ē.~ĀĀ
 īĀ.ō,±īēñ ī ŌēŪ±īē,
 7,2 Ç (,ōŪ±,īĀī'ē ±Ū± Āēī'ē
 .īōī)
 8,4 Ç (26-Ū',īō, ē
 ŌōĀ%ēīēŪĀī)
 ē Ā%ññ ŌōŪ Ā.īñĀī±ñ
 īō'īōōŪ,
 5,0 ÇŪ,Ō, ĀīñĀ±ōēōē
 ,ē%Āōī±īĀ Ōē Ōēōōōī,Āō,īēĀī
 ,ē%ōēōēōī±ŪĀīñ
 6,0 ÇŪ,Ō, ĀīñĀ±ōēōē
 ,ē%Āōī±īĀ Ōē Ōēōōōī,Āō,īēĀī
 'ī ±ī± Ūāñ
 ē±.Ō'ññ ūĀīōĀ ±ŪŪ ±
 ēŪ 0°ē%ō 40°ē (ŌŪ 32°F%ō 104°F)

īĀīōĀ ±ŪŪ ± ī ±īĀīēñ
 ēŪ-20°ē%ō 60°ē (ŌŪ-4°F%ō
 140°F)
 ē ±ĀīĀ °
 ē ē.īēĀ. 59 × 129 × 118 īī (',/,,
 ā±ōō±
 ē ē.īēĀ. 500 ,, īĀ,īī,~±ñ
 .±Ū± Āēīō,Ō.īōī±,īēŪēĀ,ōē
 .±Ū± Āēīē ē ī±ōōĀŪ
 ē ē.īēĀ. 620 ,, ,īī,~±ñ
 .±Ū± Āēī'ē .īōī NP-F100,
 īēŪēĀ,Ū.±Ū± ĀēīŪ, ī±ōōĀŪŪ
 DVM 60
 āēī ŌŪōī
 ūīĀīŪ ē~āōīēē īōī%Āīō±Ūō īē
 īēī ŌŪōī,ŌŪĀ ĀōŪōīē~āōīō,Ō
 Ūēō±
 ē ēī±,±ĀīĀ Ō ēī±%īĀēīōōŪē
 ēī. ŌŪ .6.

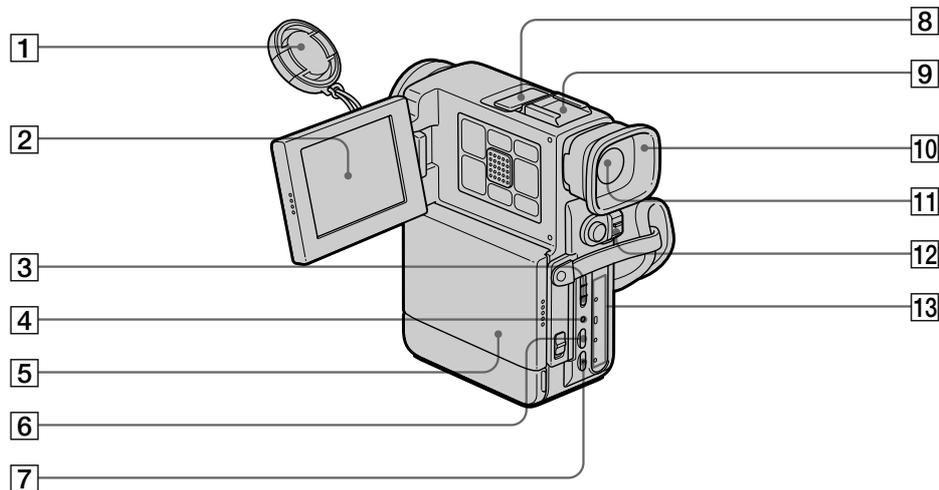
ēĀŪĀ,ōē±%±ōŪĀ ōĀ Āī. ūōī±

īĀ.ō,±īēñ ī ŌēŪ±īē,
 100 - 240 Ç ŌĀ Āī. ūōī±, 50/60 ēē
 ē ŌŪ Ā.īñĀī±ñ īō'īōōŪ,
 25 ÇŪ
 Ç'īō%īōĀ ī±ō ñēĀīēĀ
 DC OUT: 8,4 Ç, 1,8 Ā, ±.Ō~Āī
 ĀēēīĀ
 Ç'īō%ññĀ±ññē.±Ū± Āēīō,Ō
 .īōī±: 8,4 Ç, 1,4 Ā, ĀēēīĀ
 Ā±ñ%ē
 ē ēīĀīĀīēĀ
 Ā±Ū± ĀēīĀ.īōīē Sony NP-
 F100/NP-F200, īēŪēĀ,Ō-ēōīō,Ō
 Ūēō±
 ē±.Ō'ññ ūĀīōĀ ±ŪŪ ±
 ēŪ 0°ē%ō 40°ē (ŌŪ 32°F%ō 104°F)
 īĀīōĀ ±ŪŪ ± ī ±īĀīēñ
 ēŪ-20°ē%ō 60°ē (ŌŪ-4°F%ō
 140°F)
 ē ±ĀīĀ ° (Ō ē.īēĀ.)
 57 × 44 × 107 īī (',/,,
 ā±ōō± (Ō ē.īēĀ.)
 190 ,,

āōīōŪ ū'ēñ ē ūĀīē~āōīēĀ
 ī± ±īŪĀ ēōŪēīē īō,ŪŪ.Ū,
 ēĀīĀīĀī'ĀĀ Ū,Ā%ōīīĀīēñ.

Identifying the parts

εὐὸὸÁì†,†ìÈÄ ~†ὸÚÄÈ



1 Lens cap (p. 12)

2 LCD screen (p. 16)

3 START/STOP MODE switch (p. 18, 33)

4 CHARGE lamp (p. 7, 26)

5 Battery terminal cover (p. 10)
Remove the cover to install the battery back.

6 AE LOCK button (p. 46)

7 FADER button (p. 34)

8 Built-in microphone

9 Accessory shoe (p. 18)

10 Eyecup (p. 20)

11 Viewfinder (p. 89)

12 POWER switch (p. 12, 21)

13 Tape transport buttons (p. 21)

- STOP (stop)
- ◀ REW (rewind)
- ▷ PLAY (playback)
- ▶▶ FF (fastforward)
- || PAUSE (pause)

1 ä ~†ì Ó·ÄìÚÈ,† (ὸÚ . 12)

2 ù† ì ÜäÑ (ὸÚ . 16)

3 èÄ Äí†,†úÄí, START/STOP MODE (ὸÚ . 18,33)

4 ä†ìὸÓ†† CHARGE (ὸÚ . 7, 26)

5 ä ~†ì .†ú† ÄÈ†† í òìú†íúó, (ὸÚ . 10)
èìÈìÈúÄ í ~†íú %††† ùὸú†íó,ìÈ
·†ú† ÄÈìó,ó ·ìó†.

6 äìóó†† AE LOCK (ὸÚ . 46)

7 äìóó†† FADER (ὸÚ . 34)

8 ÇὸÚ ÓÄìÈ ÈÈ ÒÚòì

9 Ç°,ó% %††† ,ὸὸó†ó,†úÄí,ìó,ó
ó·ó ù%ó,†ìÈ†† (ὸÚ . 18)

10 éíÚ††† (ὸÚ . 20)

11 ÇÈ%óÈò††úÄí, (ὸÚ . 89)

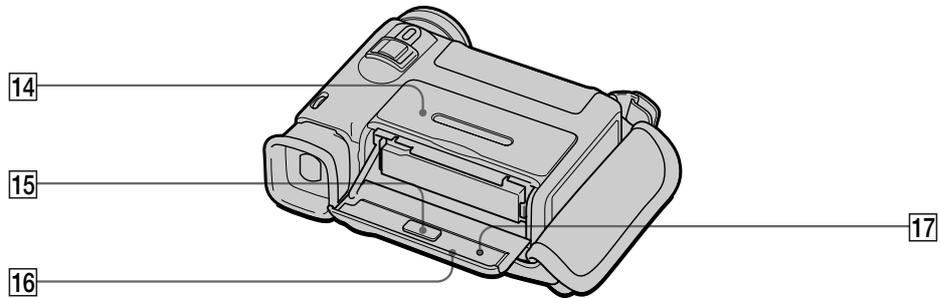
12 Ç°í†,†úÄí, POWER (ὸÚ . 12, 21)

13 äìóó†† È Ä ÄìÄ~ÄìÈ†† ÌÄìú° (ὸÚ . 21)

- STOP (ὸὸú††ìó)
- ◀ REW (ὸÄ Äìóú†† ì†Ä†%)
- ▷ PLAY (ὸὸó ÓÈÄ,Ä%ÄìÈÄ)
- ▶▶ FF (ὸÄ Äìóú††,ὸÄ Ä%)
- || PAUSE (ὸ†úÄ†)

Identifying the parts

εὐρίσκοντας τὰ μέρη



14 Cassette compartment (p. 11)

15 ▲ EJECT button (p. 11)

16 Cassette compartment lid (p. 11)

17 RESET button (p. 71)

14 ἄνοιξη ταινίας (ὄψ. 11)

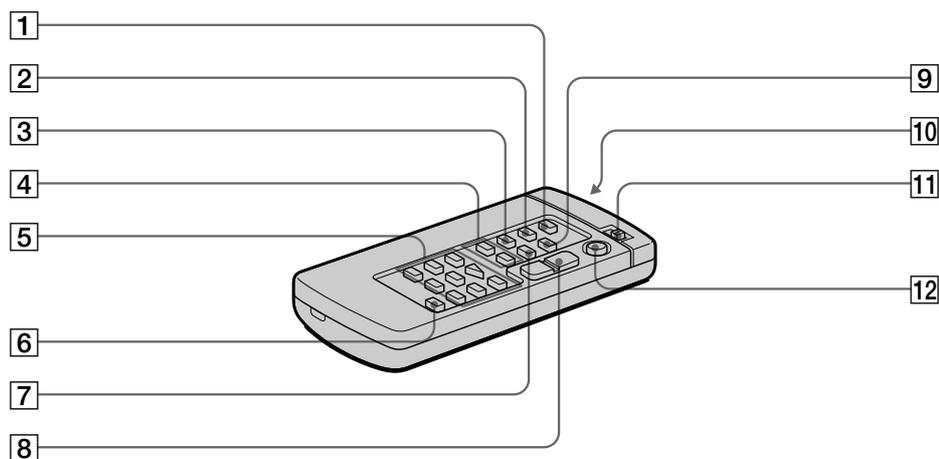
15 ἀντικείμενο ▲ EJECT (ὄψ. 11)

16 ἄνοιξη κάλυψης ταινίας (ὄψ. 11)

17 ἀντικείμενο RESET (ὄψ. 75)

Remote Commander

The buttons that have the same name on the Remote Commander as on the camcorder function identically.



- 1 PHOTO button (p. 36)
- 2 DISPLAY button (p. 21)
- 3 SEARCH MODE button (p. 51)
- 4 ◀▶ buttons (p. 51)
- 5 Tape transport buttons (p. 21)
- 6 AUDIO DUB button (p. 56)
- 7 DATA CODE button (p. 49)
- 8 Power zoom button (p. 15)
- 9 ZERO SET MEMORY button (p. 50)
- 10 Transmitter
Point toward the remote sensor to control the camcorder after turning on the camcorder.
- 11 VTR4/ID/VTR2 selector (p. 87)
Select VTR4 or ID, the same setting as COMMANDER in the menu system. Select VTR2 when using with 8mm camcorder.
- 12 START/STOP button (p. 12)

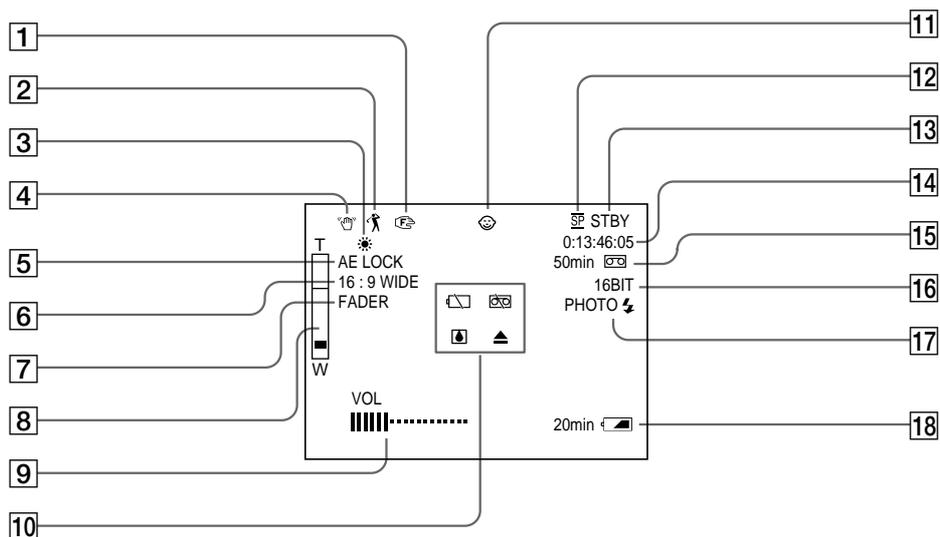
Additional Information

The buttons that have the same name on the Remote Commander as on the camcorder function identically.

- 1 àiÓÔí PHOTO (ÒÚ . 36)
- 2 àiÓÔí DISPLAY (ÒÚ . 21)
- 3 àiÓÔí SEARCH MODE (ÒÚ . 51)
- 4 àiÓÔí ◀▶ (ÒÚ . 51)
- 5 àiÓÔí ÔÂ ÂÎÂ~ÂÎË ÎÂÛ° (ÒÚ . 21)
- 6 àiÓÔí AUDIO DUB (ÒÚ . 56)
- 7 àiÓÔí DATA CODE (ÒÚ . 49)
- 8 àiÓÔí Ô Ë,Ó%ò,Ó Ú †ìÒÚÓíÚÓ † (ÒÚ . 15)
- 9 àiÓÔí ZERO SET MEMORY (ÒÚ . 50)
- 10 èÂ Â%†Ú~Ëí
†~ÂÏ ÚÂ , ìÒ †,ÎÂËË %ÈÒÚ†ì~ÈÒìì,,Ó
%†Ú~Ëí %ì† ÚÓ †,ÎÂËË,Ë%ÂÓí†ÎÁ ÒÈ
ÒÓÒÎÂ ÂÂ ,í,~ÂËË.
- 11 èÂÎÂÏÚÓ VTR4/ID/VTR2 (ÒÚ . 87)
Ç~Â ÈÚÂ ÚÒÚ†ìÓ,ÍÚ VTR4 ÈË ID
Ó%Èì†ìÓ,Ú Ò ÚÒÚ†ìÓ,ÍÓÈ COMMANDER ,
ÒÈÒÚÂÎÂ ÎÂÏ . Ç~Â ÈÚÂ VTR2 ,Ó , ÂËË
ÈÒÒÓÍ,ÁÓ,†ËË Ò 8ËË,Ë%ÂÓí†ÎÁ ÒÈ.
- 12 àiÓÔí START/STOP (ÒÚ . 12)

Operation indicators

Επιπέδου Έκθεσης



Additional Information / Νοοδιεταίτην Εύοιτήν

- 1 Manual focus/Infinity indicator (p. 43)
- 2 PROGRAM AE indicator (p. 40)
- 3 White balance indicator (p. 44)
- 4 SteadyShot indicator (p. 38)
- 5 AE LOCK indicator (p. 46)
- 6 16:9 WIDE indicator (p. 35)
- 7 FADER indicator (p. 34)
- 8 Zoom indicator (p. 15)
- 9 BRT (bright) indicator (p. 16)/VOL (volume) indicator (p. 21)
- 10 Warning indicator (p. 91)
- 11 Mirror mode indicator (p. 32)

- 1 àì%ËíτÚÓ ÙíÓÈ ÙÓÍÚÓ Ó,íË/·ÁÓíÁ·íÓÓÚË (ÓÚ . 43)
- 2 àì%ËíτÚÓ PROGRAMAE (ÓÚ . 40)
- 3 àì%ËíτÚÓ ·τíτíòτ·ÁíÓ,,Ó (ÓÚ . 44)
- 4 àì%ËíτÚÓ ÙòÚÓÈ·È,ÓÈ Ò·ÁíË (ÓÚ . 38)
- 5 àì%ËíτÚÓ AE LOCK (ÓÚ . 46)
- 6 àì%ËíτÚÓ 16:9 WIDE (ÓÚ . 35)
- 7 àì%ËíτÚÓ FADER (ÓÚ . 34)
- 8 àì%ËíτÚÓ Ù τìòÚÓíτ·ËË (ÓÚ . 15)
- 9 àì%ËíτÚÓ BRT (ñ íÓòÚË) (ÓÚ . 16) / àì%ËíτÚÓ VOL („ ÓííÓòÚË) (ÓÚ . 21)
- 10 è Â%ÚÓ ÂË%τ·ËË Èì%ËíτÚÓ (ÓÚ . 91)
- 11 àì%ËíτÚÓ ÁÁ íτí,ìÓ,,Ó ÂËËíτ (ÓÚ . 32)

Continued to the next page

è Ó%ÓíËτ·ÁÚòñìτ·òíÂ%Ú·ËË ÒÚ τíË·Á

Identifying the parts

εἰδωλὸν, ἔλεγχος ἰσορροπίας

12 Recording mode indicator (p. 14)

12 ἰσορροπίας ἔλεγχος ἰσορροπίας (ὄ. 14)

13 Recording standby mode indicator (p. 12)/
Tape transport mode indicator

13 ἰσορροπίας ἔλεγχος ἰσορροπίας (ὄ. 12) /
ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας

14 Time code indicator (p. 14)

14 ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας (ὄ. 14)

15 Remaining tape indicator (p. 14)

15 ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας (ὄ. 14)

16 Audio mode indicator (p. 60)

16 ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας (ὄ. 60)

17 Photo recording indicator (p. 36)/Electronic
flash indicator

17 ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας (ὄ. 36) /
ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας

18 Remaining battery indicator (p. 63)/
Remaining time in minutes indicator

18 ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας
(ὄ. 63) / ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας ἔλεγχος ἰσορροπίας

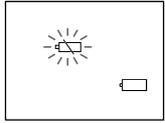
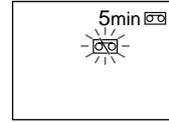
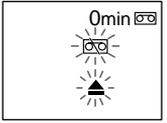
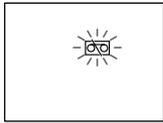
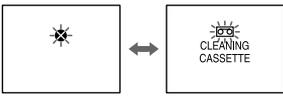


Warning indicators

If indicators flash on the LCD screen or in the viewfinder or warning messages appear on the display window, check the following:

♪: you can hear the beep sound when BEEP is set to ON in the menu system.

ΌΌΙΈ Έί%ΌΈί±ÚÓ ° ΙΈ,± Ú ί ±ιÄ ÜäÑ
 ΈΙΈ, Έ%ΌΈΌί±ÚÄΙÄΈΙΈΌ Ä%ΌÜÖ ÄΈ%±, ΈÄ
 ΟΟΟ. ÄίΈfl, ΟΌfl, ίfl, Úfl, , ΟίΟ-ΙΑ %ΌΈΌίÄfl, ÚÓ
 Ό ΌÄ, ÚÄΌΙÄ%Ü, ÄÄ:
 ♪ :C' ΙΌΈÄÜÄ Όί-±Ú, ÄÜíÄ ί-Έ
 Ä, ÚíΟ, ΌΈ ΌΈ, í±, ίΟ, %± ÜÜí-Έfl BEEP
 ÜÖÜ±íΟ, íÄí± í± ON, , ΌΈÜÄíÄ íÄí.

<p>1</p> 	<p>2</p> 	<p>3</p> 
<p>4</p> 	<p>5</p> 	<p>6</p> 
<p>7</p> 	<p>8</p> 	<p>9</p> 

- 1 **The battery is weak or dead.**
 Slow flashing: The battery is weak.
 Fast flashing: The battery is dead.
 Depending on conditions, the  indicator may flash, even if there are 5 to 10 minutes remaining.
- 2 **The tape is near the end.**
 The flashing is slow.
- 3 **The tape has run out.**
 The flashing becomes rapid.
- 4 **No tape has been inserted.**
- 5 **The tab on the tape is out (red).**
- 6 **Moisture condensation has occurred.** (p. 66)
- 7 **The video heads may be contaminated.** (p. 67)
- 8 **The clock is not set.**
 If the clock is not set when you press START/STOP button in the CAMERA mode, the message appears for 5 seconds.
- 9 **Some other trouble has occurred.**
 Disconnect the power source and contact your Sony dealer or local authorized facility.

- 1 Ä±Ú± ÄΈί-Έ .íΟί Όί±. Έ ΈΙΈ
 ΌΌίΟÜÜ, ±Ä flΈÄí. Έ.
 äÄ%íÄíÖÄ íΈ, ±íÄÄ: Ä±Ú± ÄΈί-Έ .íΟί Όί±. Έ.
 Ä'ÜÜ ÖÄ íΈ, ±íÄÄ: Ä±Ú± ÄΈί-Έ .íΟί
 ΌΌíΟÜÜ, ±Ä flΈÄí. Έ.
 ÇÄ±ΈΌΈíΟÜÜΈÖÜÜΌíΟ, ΈΈΈί%Έί±ÚÓ 
 ΙΌΈÄÜ íΈ, ±Ú, %±ΈÄ ÄΌίΈ Ä'Ä ÖÜÜ±íΟ, 5
 ΈΙΈ 10 ΈΙÜÜ.
- 2 äÄíÜ± Ό Έ-íΈΈ±ÄÜÖfl í ίΟί-Ü.
 äÄ%íÄíÖÄ íΈ, ±íÄÄ.
- 3 äÄíÜ± Ä±íΟί-Έí±Ö.
 äΈ, ±íÄÄ ÖÜ±íΟ, ΈÜÖfl .ÜÜ .í.
- 4 äÄíÜ± íÄ, ÖÜ±, íÄí±.
- 5 ç± í±ÖÖÄÜÄ íÄÜ íÄÖÄÜí± (í ±Öí±fl íÄÜí±).
- 6 è ÖΈÄÖ-í± ίΟί%ÄíÖ± Έfl, í±, Έ. (ÖÜ . 66)
- 7 ÇΈ%ÄÖ, ΌíΟ, ίΈ, ÖÄíÖΈíΟ Ä±, flÄíÄí.
 (ÖÜ .67)
- 8 ó±Ö° íÄ ÜÖÜ±íΟ, íÄí.
 ΌΌίΈ ±Ö° íÄ ÜÖÜ±íΟ, íÄí, ίΟ, %± Ç°
 í±ΈΈí±ÄÜÄ ííΟΌíÜ START/STOP, ÄΈΈíÄ
 CAMERA, ÖÖÖ. ÄíÄÄ, °Ö, Ä' Έ, ±ÄÜÖfl,
 ÜÄ'ÄíÄÄ5 ÖÄíÜ%.
- 9 äíÄÄÜÖfl í±í±fl-íΈ-Ö % Ü, ±fl Ö Ö-íÄí±.
 èÜÖÖÄ%ΈíΈÜÄΈÖÜÜíΈíÖΈÜ±íΈfl
 Ö, flΈΈÜÄÖ, Ö Ç± Έí %ΈíÄ Όí Sony ΈíΈ
 íÄÜí±í ÜÖÖííΌíΟ-Äíí-í Ö Ä%Ö ΈflÜÄí.

Additional Information / ΝΟΟΌίΈÜÄí ±fl ΈíÜÖ í± Έfl

